

Virginia

Standards of Learning Assessments

Technical Report: 1998-1999 Administration Cycle

April 2001

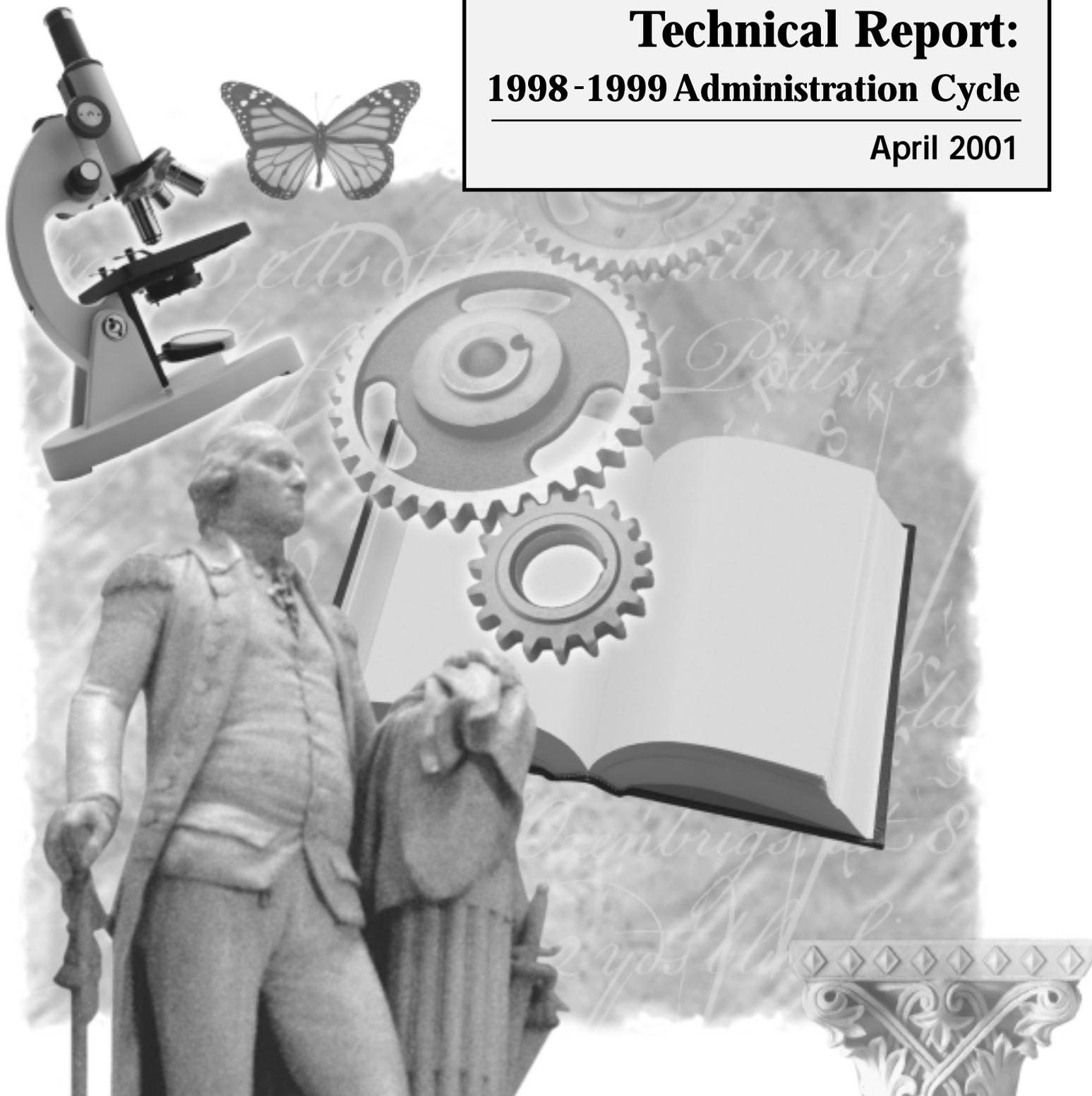


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¹ *The 1998 Virginia Technical Report* (2000).

INTRODUCTION

In 1995, the Board of Education of the Commonwealth of Virginia took an important step to raise the expectations for all students in public schools by adopting new *Standards of Learning (SOLs)* in the areas of English, mathematics, history and social science, science, and computer/technology. The *Virginia Standards of Learning* set reasonable targets and expectations for what teachers were expected to teach and what students were expected to learn. These academic standards were used to inform parents and teachers of what students were learning and to make schools accountable for teaching the content found in the *Standards of Learning*. To this end, the Virginia Department of Education (VDOE), in collaboration with hundreds of educators across the Commonwealth and with Harcourt Educational Measurement, developed a series of tests to measure student achievement against the standards.

The purpose of the *Virginia Standards of Learning Assessment Technical Report* is to inform users and other interested parties about the development, content, and technical characteristics of the Virginia *SOL* assessments. This *Technical Report* provides information for the 1998-1999 *SOL* cycle and includes the fall 1998 and spring 1999 administrations.

This report is divided into three parts:

The first part provides a historical overview of the Virginia *SOL* assessment program. An overview of the *SOL* assessment program is provided in Section 1, while information regarding the development of the assessment blueprints, the initial development, review, and field testing of items for the first *SOL* administration, and the initial standard setting are in Section 2. A description of the calibration, scaling, and equating procedures used in the program are found in Section 3.

The second part of the *Technical Report* describes the changes to the *SOL* assessments for the 1998-1999 administration cycle (Section 4).

The third part of the report presents the statistical summary of the 1998-1999 administration cycle. Section 5 outlines the analyses that were performed, with the results for the fall 1998 administration being presented in Section 6, and the results for the spring 1999 administration being presented in Section 7.

This report is supplemented by a volume of appendices that provide additional statistical and technical information regarding the 1998-1999 administration cycle.

1. DEVELOPMENT OF THE 1998 STANDARDS OF LEARNING ASSESSMENTS

The 1998 *SOL* assessments were composed of multiple-choice items and writing prompts designed to test all the content of all the *SOLs* except where noted on the assessment blueprint (see Section 2.1). Although it was not possible to include items that tested student knowledge on every *SOL* on a single assessment, items were constructed for potential use that did address every *SOL* for subsequent assessment forms. The availability of items provided the potential for assessing an *SOL* in a targeted content area that can be measured using a multiple-choice or writing format². Not all *SOLs* were assessed. See the blueprints for those that are excluded.

1.1 Overview of the Standards of Learning Assessments

Students in grades 3, 5, 8, and high school were tested using multiple-choice *SOL* assessments in the content areas listed in Table 1.1. In addition, students in grades 5 and 8, and high school, were assessed using the writing prompt. The *SOL* assessments were cumulative at the elementary and middle-school levels. That is, a content area test at one grade level contained items that addressed *SOL* content from prior grades. For example, grade 5 students taking the Science test encountered items covering content taught in both fourth- and fifth-grade science. Similarly, a grade 8 student taking an *SOL* assessment in Mathematics may have been questioned on mathematics content taught at grades 6, 7, and 8. High school tests were designed to address specific course content, regardless of the grade of the student being tested. More specific information about the *SOLs* covered by each test can be found in the assessment blueprint for the test (see Section 2.1).

Table 1.1 Virginia Standards of Learning Assessments at Each Grade Level

Content Area	Standards of Learning Assessment			
	Grade 3	Grade 5	Grade 8	High School
English: Reading and Writing	•			
English: Reading/Lit. & Resrch.		•	•	•
English: Writing		•	•	•
Mathematics	•	•	•	
History	•	•	•	
Science	•	•	•	
Computer/Technology		•	•	
Algebra I				•
Geometry				•
Algebra II				•
United States History				•
Wrld. Hist. to 1000 A.D./W. Geog.				•
Wrld. Hist. From 1000 A.D./W. Geog.				•
Earth Science				•
Biology				•
Chemistry				•

² Not all *SOLs* are assessed. See the assessment blueprints in Appendix B of the *1998 Virginia Technical Report* (2000) for those *SOLs* that were excluded.

1.2 Responsibility for the Development of the SOL Assessments

The creation of the 27 SOL assessments needed to assess student learning was a complex and time-consuming undertaking requiring the talents of individuals from the Virginia Department of Education (VDOE), Harcourt Educational Measurement, and local school divisions and local education agencies (LEAs). Teachers, administrators, and content specialists from all over Virginia were recruited to participate in the test development process.

Committee members came to Richmond on several occasions to do the actual work. Follow-up activities were accomplished by Harcourt Educational Measurement in San Antonio, Texas, and by the Virginia Department of Education in Richmond. Table 1.2 shows the groups who assumed the major responsibility in developing the SOL assessments.

Table 1.2 Responsibility for the Development of the SOL Assessments

Step in Development	Primary Responsibility
• Development of Preliminary Blueprints and Item Specifications	Harcourt; Content Committees
• Development of Preliminary Writing Rubrics	Harcourt; VDOE
• Item Writing	Harcourt
• Item Review	Content Committees
• Construction of Field Test Forms	Harcourt; VDOE
• Pre-Field Test Training Workshops	Harcourt; VDOE; LEAs
• Field Test Administrations	Harcourt; VDOE; LEAs
• Item Data Review	Content Committees
• Bias Review of High School Tests	Bias Review Committees
• Construction of Operational Test Forms	Harcourt; VDOE
• Review of Operational Test Forms	Content Committees; VDOE
• Modification of Special Forms	Harcourt; VDOE
• Review of Special Forms	Special Forms Focus Group (Region 4); Texas Education Service Center
• Final Construction of Operational Forms	Harcourt; VDOE
• Setting Standards for the 1998 SOL Assessments	Standard Setting Committees for the Virginia <i>Standards of Learning</i>

1.3 Involvement by Virginia Educators

Teachers, administrators, content specialists, and citizens from a variety of locations across Virginia participated in the development of the *SOL* assessments. The efforts of these individuals were crucial in the review of test items and the forms to ensure that the tests adequately measured student knowledge of the content of the *SOL* fairly and without bias.

Assessment Policy Advisory Committee

Members of the Assessment Policy Advisory Committee reviewed and advised the VDOE on the development and implementation of major policies of the *SOL* assessment program. This committee developed recommended guidelines and accommodations for students with disabilities and limited English proficiency. These recommendations were presented to, and adopted by, the Board of Education.

Content Review Committees

The role of the Content Review Committees was to ensure that the assessments matched the *SOLs*, were of appropriate difficulty, and were fair. Committee membership represented all levels of education, from elementary to post secondary, and from all geographic areas of the Commonwealth. Members were Virginia educators who are specialists in the content area for which the items were written or experts in test construction or measurement. The groups were representative of the ethnic and social diversity of Virginia students. The educators' understanding of Virginia curriculum and their extensive classroom experience made them a valuable source of information when developing and reviewing test blueprints, test items, and test forms. The responsibility of these committees was to take a holistic view of the test forms to ensure fairness and a balance of content across reporting categories.

Bias Review Committees and Special Forms Review Focus Group

In addition to the bias review that took place in the Content Review Committees, a separate Bias Review Committee was responsible for examining each item on the high school tests for indications of bias that would impact the performance of an identifiable group of students. Committee members were encouraged to discuss and, if necessary, reject items based on potential gender, ethnic, religious, or geographical bias.

The purpose of the Special Forms Review Focus Group was to examine the forms of the *SOL* assessments that were developed specifically for students with visual disabilities. Committee members were responsible for judging the appropriateness of the test format and editing or deleting items that were inappropriate for students with specific disabilities. In some instances, the only difference was in the size of the print used to accommodate students with visual impairments. In other cases, test forms were constructed for Braille-reading students or for students who required an audiotape of the test to participate in the testing program.

Braille and large-print versions of the test forms were constructed to accommodate students with visual impairments. Audiocassette tapes also were prepared for the Braille and large-print forms, plus the regular test forms.

Report Development Focus Groups

Eight meetings were held across Virginia to collect information from local school personnel on reporting *SOL* assessment results. Representatives from all levels of the LEAs were invited to contribute ideas concerning the type of information and report format that would maximize the usefulness of the information resulting from the test administration.

1.4 Security of Test Materials

Test materials were maintained in locked storage locations when not under supervision of Harcourt Educational Measurement or VDOE personnel. Prior to working with secure test materials, committee members were required to sign Non-Disclosure/Conflict of Interest Agreements. By signing the agreements, participants agreed not to reveal any information about test content, items, scoring keys, or other test-related materials. They also agreed not to reproduce any test materials or use any test-related information for financial gain.³

³ A copy of the non-disclosure agreement is shown in Appendix A of the *1998 Virginia Technical Report* (2000).

2. ASSESSMENT DEVELOPMENT AND FIELD TESTING

2.1 Designing Assessment Blueprint and Item Specifications

In order for the new assessments to accurately measure the content of the *Standards of Learning*, Harcourt Educational Measurement staff reviewed the Virginia *SOLs* and developed proposed assessment blueprints for each grade and content area.

Assessment blueprints functioned as maps, or plans, for test constructors. On a blueprint, the identification of content or reporting categories for each *SOL* made it possible for items to be included on a test that matched specific test content. In addition, *SOLs* that could not appropriately be tested by a multiple-choice item format were identified and excluded from testing. Test blueprints also made it possible to determine the relative emphasis given to a content area by calculating the number of test items included in each reporting category. Content Review Committees determined which *SOLs* were to be tested and which could not be tested using multiple-choice format. The test blueprints provided the structure for constructing test forms. Those *SOLs* to be tested were grouped into similar content reporting categories. In many instances, reporting categories were identical to the clustering of standards in the *SOL* documents. At other times, Harcourt Educational Measurement staff members identified reporting categories through a content analysis of the standards.

In December 1996, the Content Review Committees reviewed and modified the draft test blueprints. The committees were organized into grade-specific groups and, at the high school level, into subject-specific groups, to most efficiently judge the grade and content appropriateness of the blueprints. Committee members were afforded the opportunity to revise the number of items in each reporting category in a content area to better reflect the emphasis they believed a reporting category should have on a particular test. Once approved by committee members, the draft blueprints were used as guides in the development of *SOL* field tests.

Item specifications were general rules or guidelines for the format and layout of test items and ensured a consistency across tests and content areas in the *SOL* assessments. For example, one specification was that all multiple-choice items have four possible choices. Harcourt Educational Measurement assessment development specialists drafted item specifications for each content area and grade level. The specifications provided item writers, item reviewers, and other Harcourt Educational Measurement staff with the guidelines necessary to produce high-quality items tailored to the needs of the *SOL* assessments.

Advance copies of the assessment blueprints were published by the Virginia Department of Education. For grades 3, 5, and 8, the assessment blueprints for all content areas within a grade are in the same booklet. For the high school assessments, there are separate blueprint booklets for Secondary English, Algebra I, Geometry, Algebra II, World History to 1000 A.D./World Geography, World History From 1000 A.D. to the Present/World Geography, United States History, Biology, Chemistry, and Earth Science. Each booklet introduces the purpose and organization of the *SOL* blueprint, provides development guidelines for the assessment in question, and references the *SOL* assessment content to the *Virginia Standards of Learning* in both tabular and expanded form.⁴

⁴ Copies of the assessment blueprints are contained in Appendix B of the *1998 Virginia Technical Report* (2000).

2.2 Developing and Reviewing Test Items

Multiple-Choice Item Development

Upon completion of the item specifications, Harcourt Educational Measurement content specialists and item writers constructed thousands of multiple-choice items to these specifications. Working in collaboration with the VDOE, the Harcourt assessment development team facilitated the review of draft multiple-choice items. The committees were divided into subgroups during the item review process to enable members to focus on items written to their areas of expertise. During the pre-review orientation, committee members were educated in the item review process. They were taught to judge items on the basis of their difficulty, clarity, appropriateness, and relevance to the purpose of the test. Reviewers also were directed to critique each item for its interaction with other items, the appropriateness of accompanying artwork, correctness of keyed responses, and plausibility of the incorrect answer choices (distractors)⁵.

During the item review process, the Content Review Committees were trained to detect potential item bias in the areas of gender, ethnic, religious, socioeconomic, and regional characteristics. Committee members were encouraged to note their concerns about items they perceived as biased in content or format.

As a result of the review process, some items were eliminated from the prospective field test item bank, and others were marked for revision and inclusion at a later date⁶.

Writing Prompt Development

Harcourt Educational Measurement staff members drafted over 100 potential writing prompts. By December 1996, 36 writing prompts each for grades 5, 8, and 11 were produced for use in the writing assessment. Prompts were written in the form of a question, an issue, or a hypothetical situation. Prompts were appropriate for the grade level being tested in terms of difficulty, interest, and reading level, as determined by a Content Review Committee.

In January 1997, writing Content Review Committees for grades 5, 8, and high school met to review and revise the prompts. Committee members selected 24 prompts at each grade level for inclusion into the pool of potential prompts for the English writing test. Along with the development of the writing prompts, rubrics were developed to student writing samples in three domains: *Composing*, *Written Expression*, and *Usage and Mechanics*. These domains were identified by members of the English: Writing Committees. There were nine separate scoring rubrics (one for each domain at each grade level), and they were field tested in the spring 1997 SOL writing field test.

2.3 Item and Writing Prompt Field Tests: Spring 1997

Field tests of the SOL assessments were conducted in spring 1997. Field testing involved administering items to a sample of students across the Commonwealth. The purpose of a field test is to collect information about test items, not about the students who take the test. More specifically, the following list delineates the purposes of the field test:

⁵ A copy of the guidelines used by the committees appears in Appendix C of the *1998 Virginia Technical Report* (2000).

⁶ Review Committee materials are found in Appendix C of the *1998 Virginia Technical Report* (2000).

To provide an array of statistical information, such as the percentage of students answering each item correctly, a difficulty rating for each item, and the ability of each item to discriminate between those students who scored well on the test and those who did not. Field test results also helped to identify items that were potentially biased by ethnicity or gender against students who are members of targeted demographic groups. With this information, committee members were able to identify items for exclusion from the operational forms of the tests.

To provide information regarding the test administration procedures, including those for assessing students with disabilities. Examiners were asked to comment on directions for administering the standard test, as well as tests administered with accommodations, such as Braille, large-print, and audiotape forms of the tests.

To provide representative teachers, students, and administrators across Virginia with an opportunity to become familiar with the format and general administration procedures of the tests.

The spring *SOL* field tests were administered to provide information about the newly developed test items to the staff at Harcourt Educational Measurement and members of the Content Review Committees. The information provided by the field tests enabled all parties to make informed decisions about test items and the construction of test forms.

Field Test Form Construction

To ensure that sufficient high-quality test items would be available for the two required test forms for the spring 1998 operational assessment, approximately 4,875 items were included in 135 (approximately five for each content area) field test forms. Only items that were acceptable to members of the item review committees were included.

Each form was developed to closely reflect the specifications of its test blueprint and consisted of one content area per grade level. Each form within a content area had approximately 30% of its items in common with the other forms. Forms consisted of 28 to 45 unique items and 12 to 18 common or “linking” items. This common-item test design provided the link used to place the difficulty estimates for all the items in each subject area at each grade level on a common scale. The writing assessments were also field tested in spring 1997. Twenty-four different writing prompts for the writing component of the *English: Writing Test* were field tested at grades 5, 8, and 11.

Test Administration Preparation and Materials

Pre-test workshops for representatives of all local school divisions were held across the state prior to the field test. The workshops provided participants an overview of the test content, security expectations, procedures for completing answer documents, and the receipt, distribution, and return of materials.

Three manuals were developed for the *SOL* tests. A *Division Director of Testing Manual*, *School Coordinator’s Manual*, and *Examiner’s Manual* provided information about the receipt, distribution, security, and return shipment of test materials. In addition to the manuals, directions for administering each *SOL* test were developed and distributed. Several of the *SOL* tests required the use of ancillary materials such as calculators, protractors, compasses, and rulers. A list of these materials can be found in Table 2.1.

Field Test Administration: Spring 1997

In spring 1997, every student in grades 3, 5, 8, and 11 was involved in field testing the *SOL* assessments in specified content areas. Field test forms were distributed across Virginia to sample a large enough group of students to ensure that the information collected from their responses would allow for analysis of item data. The aim of the sampling procedure was to obtain a representation of students that would mirror the overall composition of Virginia.

A student did not take the full complement of tests, but generally one field test in a content area. For example, students in one third-grade class in a school may have taken a Science field test, while third-grade students in a second class in the building took a Mathematics field test.

In the spring 1997 field test for high school students, some field tests were administered to students who had not taken the course. The scores of the students were eliminated when statistics were run.

Field test administration materials and procedures mirrored those of the operational tests as closely as possible. Separate answer documents incorporating many of the features of the operational answer documents were used to collect demographic data and other information necessary to analyze the results of the field test. Wherever possible, the test forms were modeled on the test blueprints with regard to the number of items and administration time, so that they closely resembled the operational test forms. The major exception occurred with the Reading and Writing tests that relied on passages. Since it was assumed that many items would be rejected after the field test data were analyzed, several more items were included with each reading passage than actually would be used during operational testing.

Twenty-four potential writing prompts were field tested at each of the three grade levels. The number of participants ranged from 266 at grade 11 to 938 at grade 8. The writing samples at each grade level were scored by different teams of readers. Prior to scoring the responses to each prompt, the scoring teams reviewed the rubric and discussed approximately ten randomly selected writing samples from the field test papers. The scoring process included two blind scorings by team readers with score discrepancies resolved by the team leader.

Field Test Statistics

The descriptive statistics were derived from the spring 1997 field test for each content area, form, and reporting category. They included raw scores, means, and standard deviations by demographic characteristics, form, and reporting categories. The demographic variables included grade level, gender, ethnicity, limited English proficiency status, disability status, and special test accommodations status.

Results from the field test administration that provided a basis for including items in the operational test forms and constructing equivalent forms included item statistics for multiple-choice items and forms, item statistics for the writing prompt domain scores, Rasch item statistics, and differential item functioning (DIF) statistics.

The statistics calculated from the multiple-choice items included:

- numbers of students tested;
- traditional difficulties (p -values);
- item-option response distributions for all respondents, for high-, middle-, and low-ability groups, and by gender and ethnic group;
- biserial and point-biserial correlations.

Statistics computed on the results of the writing field test included:

- numbers of students tested;
- frequency distributions, means, and standard deviations for the writing domain raw and total scores;
- correlations between grades and among the multiple-choice and writing domain raw scores;
- percent agreement tables for the writing domain scores assigned by the readers.

The descriptive statistics for the writing domain scores also included analyses by gender and ethnicity. Readers were also asked to perform a qualitative analysis of the writing responses. This analysis is described in more detail below.

To supplement the traditional statistics, item difficulty parameter estimates based on *Item Response Theory* (IRT) were computed. Using this technique, a common underlying construct was assumed to be measurable and estimable as a function of item or test performance, making it possible to estimate item difficulty and item fit.

Differential item functioning (DIF) statistical procedures such as the Mantel-Haenszel Alpha were used to compute the probability that one demographic group is more likely to answer an item correctly than another group. This information was useful in reviewing items and tests for potential bias. High values of the Mantel-Haenszel Alpha indicated that an item interacted differently among equally able students in the reference and comparison groups. When the probability was significantly different across groups, the item warranted further examination. The Mantel-Haenszel Alpha procedure was used to compare white and African-American students, white and Hispanic students, and male and female students. Mantel-Haenszel group differences that exceed a chi-square significance level of 0.10 were “flagged” for further scrutiny.

A Rasch IRT method of computing DIF statistics was also employed to provide item difficulty estimates among demographic groups. Under the assumptions of the Rasch model, the only reason for differences in item difficulty statistics among groups was some group characteristic other than achievement. When the Rasch item difficulty estimates were statistically significant between groups, it was an indicator that further examination was warranted. The Rasch procedure was used to compare white and African-American students, white and Hispanic students, and male and female students. Rasch item difficulty differences exceeding 0.52 were “flagged” for further scrutiny.

A detailed description of methods for identifying DIF in test items can be found in Camilli and Shepard (1994). Wright and Stone (1979, pp. 192-195) provide a derivation of the criterion used to flag Rasch item difficulty group differences.

2.4 Writing Prompt Selection and Scoring

Final Selection From Field-Tested Writing Prompts

During the scoring process for field-tested prompts, scorers and team leaders recorded their observations about student responses to each prompt. Subsequently, team leaders were responsible for compiling a qualitative report which addressed the following questions:

- Did the students understand what was being asked of them by the prompt?
- Did the students seem engaged by the prompt?
- Were the students able to effectively focus on a central idea, provide specific information and details, and the like?
- Did the scorers, based upon reading hundreds of student responses to the prompt, recommend that this prompt be used for live testing?

The same prompt was administered to all three grade levels. Papers resulting from this prompt were used by committees to finalize the rubric before the remainder of the prompts were scored. The results of these analyses, in combination with the field-test statistics generated by Harcourt Educational Measurement, were reviewed by the English Writing Committees as they considered which prompts should be included in a prompt item bank for future operational administrations of the *SOL* writing assessment.

Scoring Student Writing Samples: Selecting and Training Scorers

All scoring was done outside the state of Virginia by highly qualified, experienced readers. These readers were drawn from a database of over 1,000 college graduates who had completed the selection process for readers. Readers for the Virginia *SOL* writing test had a minimum of a bachelor's degree in an appropriate academic discipline (e.g., English, education), demonstrated ability in performance assessment scoring, and preferably had teaching experience at the elementary or secondary level. The selection process required that each candidate successfully complete a personal interview, a scoring screening sample, a writing sample exercise, and a grammar test. Throughout the selection process, the need for ethnic and racial diversity was emphasized.

The training of readers was conducted by a Performance Assessment Specialist and team leaders, and was critical to high-quality, consistent, and reliable scoring of the *SOL* writing assessments. Readers underwent separate training for each writing prompt. The writing samples used for training scorers were identified from the samples scored during the rangefinding process (see below). These and other writing samples identified by Harcourt Educational Measurement staff and VDOE staff were annotated for use as scoring guides during reader training, qualifying, and calibration. The primary goal of training was to convey to readers the decisions made during rangefinding and to help them internalize the scoring protocol so that they might effectively apply those decisions.

Prospective scorers were provided an opportunity to qualify as a table leader. Table leaders were responsible for supervising small groups of readers and possessed the leadership and communication skills needed to function in a project of this nature. Candidates for table leader positions qualified by achieving a 70% or better exact agreement on each domain when scoring on one set of ten qualifying papers and 60% or better exact agreement (spring 1998 only) on a second set of papers.

Reader training and qualifying followed the same process as the table leader training and qualifying. The criteria for readers were the same as for table leaders except that some readers who were close to qualifying (e.g., 60% agreement on two sets of papers, spring 1998 only) were permitted to read on probation.

Training began with a discussion of the three writing domains used in the scoring model: composing, written expression, and usage/mechanics. Trainees were introduced to the writing prompt, and then domain-specific training began with a discussion of the features of a domain as well as the score scale. The scale consisted of four score points:

- 4 = Consistent control;
- 3 = Reasonable control;
- 2 = Inconsistent control; and
- 1 = Little or no control.

Following the discussion of each domain and score, prospective table leaders and readers independently scored the domain in a set of papers. Once all domains had been discussed and all domain-specific training sets scored, table leaders and readers began scoring three mixed-domain sets of papers.

To ensure accuracy in scoring, trainees were instructed and practiced scoring regular student responses and a set of calibration prompts each day. Calibration was a process whereby readers re-scored five student papers that previously had been scored by expert scoring team leaders. Calibration sets of student writing samples were dropped in at varying times during the day so that scorers were not aware of when they were scoring calibration papers. Scorers who were not consistent with the scores of the experts on the calibration samples were retrained to improve the accuracy of their scoring. Results of these calibration exercises were reported to the VDOE on a daily basis.

Selecting Anchor Papers

In an exercise described as *rangefinding*, team leaders at Harcourt Educational Measurement familiar with the *SOL* assessment writing prompts organized student writing samples into sets representing high-, middle-, and low-quality responses. The rangefinding process was conducted for each grade level tested. The sets of responses then were used by members of the English Writing Committees to identify model writing samples for each of the three quality levels. These model samples are referred to as *anchor papers* and the identification process as *anchor pulling*.

Anchor pulling involved the scoring of student responses by committee members at each grade level, core members (participants in anchor pulling for all three grade levels), and representatives from Harcourt Educational Measurement and National Computer Systems (NCS), the subcontractor scoring the writing. During the anchor-pulling process, readers scored the papers independently, the range papers were discussed, and consensus was reached on where the papers fell in the range of scores for a category. Participants checked the range of scores at each quality level to ensure that there was no overlap between levels. The anchor-pulling exercise took place over three days, with the focus on one writing domain per day.

Scoring Student Writing Samples

The actual scoring of the student writing responses was carried out by a cadre of trained scorers under the direction of room directors at Harcourt Educational Measurement's Performance Assessment Scoring Center (PASC) in San Antonio. The primary responsibility of the room director during the actual scoring of papers was to ensure high quality scoring and resolve questions that arose during the scoring process. All invalid (unscorable) papers were reviewed by the director to confirm the decision of the scorer. Room directors were also responsible for evaluating readers' performance on the calibration sets. The directors and training supervisor, in conjunction with VDOE staff, monitored reading rates, accuracy rates, and the overall reliability and consistency of scoring. It was also the director's responsibility to retrain readers when necessary.

Prior to the actual scoring, readers were given instruction to cull any papers that were written on the alternate prompt. Scorers also were asked to mark certain papers as "blank" or invalid, including blank papers, off-topic papers, or papers written to the wrong prompt. Readers also were instructed to alert papers that contained troubling content, as well as papers where it appeared that students had cheated or where there had been teacher interference.

2.5 Item Data and Item Bias Reviews: Summer/Fall 1997

Item Data Review

The purpose of the item data review meetings was to conduct a final examination of the items prior to their inclusion in the *SOL* item bank. The item bank, maintained by Harcourt Educational Measurement, served as the repository from which to draw items for current and future forms of the *SOL* assessments. Subsequent to the field test, the Content Review Committees met once again to review items for fairness and bias. The item statistics that were reviewed by the committees included the Mantel-Haensel Alpha and Rasch item difficulty group differences described above. Committee members were instructed in the interpretation of item statistics and their use in judging the quality and appropriateness of each item in the tests.

The data review process provided committee members with an opportunity to discuss concerns about item content, format, bias, and fit with the *SOL*. Participants completed individual rating forms to express their opinion about including an item in the *SOL* item bank. These ratings were tabulated and used to guide decisions about the inclusion of items on the operational test forms. Items that passed all stages of the development process, item review, field test, data review, and bias review were placed in the item bank and were eligible for use on future *SOL* assessments.⁷

In addition to reviewing items, draft item specifications and draft blueprints were reviewed by members of the Content Review Committees during the item data review. Committee members offered recommendations for revisions when deemed necessary. Suggested revisions included adjusting the total number of items on the test, adjusting the number and/or type of reporting categories, and adjusting the number of items in each reporting category. The final blueprints were used to construct the first operational test forms, administered in the spring of 1998. Published copies of the blueprints were distributed to all public school teachers in Virginia. Table 2.2 presents, for each of the *SOL* assessments, the numbers of items that were reviewed by the Content Review Committees, and (where available) the numbers and percentages of items that passed the item data review process.

High School Bias Review

Because passing certain high school *SOL* assessments will be a high school graduation requirement, it was especially important that the assessments be free of factors that unfairly impact a group of students. Therefore, a bias review was conducted by a separate Bias Review Committee representing each content area to be tested in addition to the bias review during the data review process. Bias Review Committee members were asked to scrutinize items for potential stereotyping or other forms of bias. The purpose of the bias review was to identify any items that appeared to have the potential to treat any ethnic, gender, or regional group of students differently from other groups. Committee members examined the response distribution for each of the demographic groups identified for the study. The intent of this examination was to determine if members of a certain group were drawn to one or more of the answer choices for the item. If a large percentage of one group selected a particular response, or did not select a particular response, the item was carefully examined.

The training and procedures were similar to those used during the item review meetings. The committee's task focused solely on reviewing test items for potential bias after the items had been reviewed by the Content Review Committees. It was the committee's responsibility to ensure that items were fair to all students and that all students would have an equal opportunity to demonstrate achievement regardless of gender, ethnic background, religion, socio-economic status, or geographic region.⁸

⁷ A sample from the Data and Bias Review Data Books and item data review materials used by the Content Review Committees are included in Appendix C of the *1998 Virginia Technical Report* (2000).

⁸ Guidelines used by members of the Bias Committee are presented in Appendix D.

2.6 Review of Operational Forms

Content Review Committees were reconvened in 1998 to review operational forms of the *SOL* assessments. Committee members had the task of approving or editing two forms of each grade level or high school test to determine the content validity and equivalency of the test forms as a whole. While the previous committee reviews were concerned with individual items, the focus of the forms review was the full operational test forms.

Additionally, a Special Forms focus group, in conjunction with staff from the Virginia Department of Education and Harcourt Educational Measurement, met to examine the test items and forms and consider their appropriateness for use on Braille forms, audiotapes, and large-print format.

2.7 Setting Final Standards for the 1998 *SOL* Assessment

As Crocker and Algina (1986, p. 410) point out, “(m)any situations require the setting of cutoff scores before test performance is interpreted. ... The practice of setting cutoff scores is commonly called *standard setting*.” In June 1998, the Virginia Board of Education appointed a Standard Setting Advisory Committee (SSAC). The SSAC was responsible for reviewing the procedures and operations of the eight committees involved in the standard setting recommendation process for the 1998 Virginia *Standards of Learning* tests. Committees were created to set standards for the assessments in grade 3, grade 5, Reading, Writing, Mathematics, History, Science, and Computer/Technology. The assignment of the *SOL* assessments to the eight committees is shown in Table 2.3.

Each of the committees was responsible for setting two cutoff scores for the *SOL* assessments. These cut scores were used to establish three performance categories:

- *Advanced Attainment of the Standards (Pass)*
- *Proficient Attainment of the Standards (Pass)*
- *Does Not Meet the Standards (Fail)*

Two standard-setting methods were used to set the cut scores. The method used in the multiple-choice *SOL* assessments is known as the *modified-Angoff* procedure, while that used for the English: Writing assessments at grades 5, 8, and end-of-course is known as the *Bookmark* procedure. The Bookmark procedure was used for setting standards on the English: Writing assessments, since those assessments made use of both multiple-choice items and a direct-writing prompt.

The initial steps of the procedures were much the same. In each case, the standard setting committee members were presented with a general definition and description of standard setting as being a systematic way of making a professional judgment about how many points a student must earn in order to meet a specified criterion.

Next, the committees took the test on which the cut scores were to be set in order to simulate the experience of students taking the test. Only the multiple-choice components of the assessments were taken. For the English: Writing assessments, committee members were not asked to write a paper but were trained briefly in how the writing papers were scored. This training included looking at the scoring guide or rubric, as well as looking at student papers which exemplified each of the score points.

The committee members then were asked to discuss and develop definitions and descriptors of the three performance categories. The purpose of this task was for the committee members to define the particular skills and knowledge that separate those students who are barely proficient in the particular content standards from those who do not meet the content standards. In a similar way, the committee members were asked to define the skills and knowledge separating the students who are advanced from those who are proficient in the content standards.

After these initial steps, the modified-Angoff procedure proceeded as follows:

Given a copy of the *SOL* assessment in the content area, committee members were asked to independently examine each of the items. They were asked to estimate the percentage of barely proficient students who would answer each question correctly. Committee members were instructed to think of what they should be able to do, rather than what they can do now. The procedure was repeated for the advanced category. At the end of this round of ratings, each member had recorded two estimated percents for each question on the assessment.

Each member's *barely proficient* ratings were averaged and multiplied by the number of the items on the test in order to produce a cut score. The process was repeated for each member's *advanced* ratings.

The range of the cut scores was presented to the entire committee and discussed. The members had the opportunity to refine their original definitions and descriptors in light of this feedback. When they had completed their discussion, the process started over. All in all, there were three rounds of ratings followed by discussions.

The end of the final round, the committee's task was completed, and the results of their work was presented to the Board of Education as ranges of potential cut scores.

The Bookmark method differed from the modified-Angoff method in how ratings were obtained from the committee members:

The committee members were presented with booklets containing the multiple-choice items ordered from easiest to hardest based on the spring 1998 assessment. The booklets were ordered so that the easiest item was at the front of the booklet and the hardest item was at the rear. Interspersed throughout the booklet were student writing papers ordered from low score point to high score point.

The members were asked to move through the ordered booklets and to think about the skills and knowledge exemplified by the multiple-choice questions and the scores assigned to the writing prompts. The committee was asked to place a "bookmark" in the booklet at the point where the items and papers prior to the bookmark exemplified the knowledge and skills needed by a student to be considered *barely proficient* in writing. In the same way, a second bookmark was placed by the committee to indicate the knowledge and skills needed by a student to be considered *barely advanced*.

The committee was provided with a table of each member's ratings and allowed the opportunity to discuss the results, and to refine the definitions and descriptors of the performance categories. When they had completed their discussion, the process was repeated for a total of three rounds of ratings and discussions.

At the end of the final round, the committee's task was completed, and the results of their work were presented to the Board of Education as ranges of potential cut scores.

One measure of how well the committees did their work is to examine the convergence of their ratings over the three rounds of the standard setting process (cf. Reckase, 2000, p. 39). That is, as the committee members proceeded with the standard setting process, one would expect that the members would use the feedback given to them to reduce the variation in their ratings. A commonly used index to describe the variation of measurements is the standard deviation, and the expectation would be that, for a given cut score, the standard deviations of a committee's ratings would decrease from the initial round of ratings to the final round. Table 2.4 shows that, for the most part, this was in fact the case. The standard deviation of each committee's ratings decreased from the initial round to the final round of ratings for the proficiency cut score. For the advanced cut score, 23 out of 27 standard settings showed the standard deviations of the committee's ratings decreasing from the initial round to the final round. All of the standard deviations for the ratings at grades 3, 5, and 8 decreased. The standard deviations of the ratings for Algebra I, Earth Science, and Chemistry remained the same, while the ratings for World History From 1000 A.D. to the Present/World Geography increased slightly. Overall, these data suggest that, while the committees were able to use the ratings feedback in setting their standards, they were not dominated by peer pressure to confirm to a single standard.

As was stated above, the results of the committees were presented as recommendations to the Board of Education. Specifically, the recommendations were presented as a range of suggested cut scores that the Board could take into consideration in setting the final cut scores for the Virginia *SOL* assessments. A report also was sent to the Virginia Board of Education Standard Setting Committee containing the backgrounds and demographics of the committee members, summaries of committee evaluations of the standard setting process, reports from the committee chairs, and the final passing scores established by the Board of Education for the 1998 *SOL* assessments.⁹ The Board of Education's final cut scores *SOL* assessments are shown in Table 2.5.

⁹ Appendix E of the 1998 *Virginia Technical Report* (2000) provides additional details of the modified-Angoff and Bookmark standard setting procedures, as well as reports and memoranda from Standard Setting Committees for the Virginia *Standards of Learning*. Included in the appendix is the initial report containing the committee recommendations for each 1998 *SOL* assessment by grade and content area. These recommendations also included the names of the committee members and data from each round of the standard setting.

Table 2.1 List of Ancillary Materials Used in 1998 Virginia *Standards of Learning* Assessments

<i>Standards of Learning</i> Assessment	Ancillary Materials
Grade 3	
Mathematics	Ruler, scratch paper
Science	Ruler, scratch paper
Grade 5	
Writing	Dictionary & scratch paper for direct-writing component only
Mathematics	Ruler, scratch paper, calculator, protractor
Science	Ruler, scratch paper, calculator
Grade 8	
Writing	Dictionary & scratch paper for direct-writing component only
Mathematics	Ruler, scratch paper, calculator, formula sheet
Science	Ruler, scratch paper, calculator
High School End-of-Course	
Writing	Dictionary & scratch paper for direct-writing component only
Algebra I	Ruler, scratch paper, calculator, formula sheet
Geometry	Ruler, scratch paper, calculator, formula sheet, compass
Algebra II	Ruler, scratch paper, calculator, formula sheet
Earth Science	Ruler, scratch paper, calculator
Biology	Ruler, scratch paper, calculator
Chemistry	Ruler, scratch paper, calculator, Periodic Table of the Elements

Table 2.2 Numbers and Percents of Items Passing Data Review for the Spring 1998 SOL Assessments

<i>Standards of Learning Assessment</i>	No. of Items Reviewed	No. of Items Passing Data Review	% of Items Passing Data Review
Grade 3			
English: Reading	150	140	93
English: Writing ¹	100	-	-
Mathematics	250	230	92
History	320	302	94
Science	200	175	88
Grade 5			
English: Reading/Lit. & Resrch.	250	226	90
English: Writing ¹	200	-	-
Mathematics	250	238	95
History ¹	200	-	-
Science	250	220	88
Computer/Technology	150	146	97
Grade 8			
English: Reading/Lit. & Resrch.	250	241	96
English: Writing ¹	320	-	-
Mathematics	300	275	92
History	250	210	84
Science	200	161	81
Computer/Technology	200	151	76
High School End-of-Course			
English: Reading/Lit. & Resrch.	270	235	87
English: Writing	270	230	85
Algebra I	450	407	90
Geometry	225	172	76
Algebra II	225	209	93
United States History	300	269	89
Wrld. Hist. to 1000 A.D./W. Geog. ¹	300	-	-
Wrld. Hist. From 1000 A.D./W. Geog.	300	278	93
Earth Science ¹	250	-	-
Biology	250	224	90
Chemistry	250	217	87

¹ Number and percents of items passing Data Review unavailable

Table 2.3 Assignment of *Standards of Learning* Assessments to Standard Setting Committees

<i>Standards of Learning</i> Assessment	Standard Setting Committee Assignments							
	1	2	3	4	5	6	7	8
Grade 3								
English: Reading/Writing	•							
Mathematics	•							
History	•							
Science	•							
Grade 5								
English: Reading/Lit. & Resrch.		•						
English: Writing			•					
Mathematics		•						
History		•						
Science		•						
Computer/Technology				•				
Grade 8								
English: Reading/Lit. & Resrch.					•			
English: Writing			•					
Mathematics						•		
History							•	
Science								•
Computer/Technology				•				
High School End-of-Course								
English: Reading/Lit. & Resrch.					•			
English: Writing			•					
Algebra I						•		
Geometry						•		
Algebra II						•		
United States History							•	
Wrld. Hist. to 1000 A.D./W. Geog.							•	
Wrld. Hist. From 1000 A.D./W. Geog.							•	
Earth Science								•
Biology								•
Chemistry								•

Table 2.4 Initial and Final Standard Deviations of Standard Setting Committee Members' Ratings

<i>Standards of Learning Assessment</i>	No. of Committee Members	Proficient Cut Score Ratings		Advanced Cut Score Ratings	
		Initial SD	Final SD	Initial SD	Final SD
Grade 3					
English: Reading/Writing	19	6.0	4.6	5.0	2.1
Mathematics	19	5.9	4.9	4.3	3.3
History	19	4.5	3.8	5.0	3.3
Science	19	5.5	4.0	4.0	1.9
Grade 5					
English: Reading/Lit. & Resrch.	20	5.1	3.6	3.7	1.8
English: Writing	19	4.6	3.2	2.4	1.7
Mathematics	20	5.6	4.6	3.0	2.2
History	20	4.5	3.8	3.1	2.2
Science	20	4.5	3.6	3.6	1.8
Computer/Technology	11	4.7	1.7	2.0	1.8
Grade 8					
English: Reading/Lit. & Resrch.	17	4.0	3.6	3.0	2.3
English: Writing	19	4.0	2.4	11.1	2.0
Mathematics	19	4.7	3.0	2.5	2.2
History	21	6.3	4.8	4.0	2.8
Science	20	3.3	3.0	3.2	1.8
Computer/Technology	11	6.0	3.2	3.0	2.3
High School End-of-Course					
English: Reading/Lit. & Resrch.	17	3.6	3.4	4.1	3.4
English: Writing	19	7.7	4.3	3.3	2.1
Algebra I	19	3.8	3.4	1.9	1.9
Geometry	19	6.0	2.8	2.1	1.5
Algebra II	19	4.8	3.5	2.3	1.6
United States History	21	7.4	5.7	5.3	3.8
Wrld. Hist. to 1000 A.D./W. Geog.	19	4.3	3.9	3.0	3.5
Wrld. Hist. From 1000 A.D./W. Geog.	20	5.3	4.9	3.9	2.9
Earth Science	20	2.5	2.4	1.4	1.4
Biology	20	3.3	2.6	2.7	2.1
Chemistry	20	2.9	2.3	1.4	1.4

Table 2.5 Virginia Standards of Learning Assessments: Passing Scores Established by the Board of Education

Standards of Learning Assessment	Max. Score	Pass (proficient)		Pass (advanced)	
		Raw Score	Percent of Max. Score	Raw Score	Percent of Max. Score
Grade 3					
English: Reading/Writing	45	32	71%	42	93%
Mathematics	50	36	72	45	90
History	40	24	60	36	90
Science	40	27	68	36	90
Grade 5					
English: Reading/Lit. & Resrch.	42	28	67%	39	93%
English: Writing	44	32	73	41	93
Mathematics	50	34	68	46	92
History	40	26	65	37	93
Science	40	26	65	37	93
Computer/Technology	30	17	57	27	90
Grade 8					
English: Reading/Lit. & Resrch.	42	27	64%	37	88%
English: Writing	44	30	68	41	93
Mathematics	60	37	62	55	92
History	50	33	66	45	90
Science	50	29	58	45	90
Computer/Technology	40	26	65	36	90
High School End-of-Course					
English: Reading/Lit. & Resrch.	42	24	57%	37	88%
English: Writing	54	37	69	49	93
Algebra I	50	27	54	45	90
Geometry	45	27	60	41	91
Algebra II	50	31	62	45	90
United States History	61	40	66	55	90
Wrld. Hist. to 1000 A.D./W. Geog.	61	33	61	55	90
Wrld. Hist. From 1000 A.D./W. Geog.	63	36	57	57	90
Earth Science	50	30	60	45	90
Biology	50	26	52	45	90
Chemistry	50	27	54	45	90

3. CALIBRATION, EQUATING, AND SCALING PROCEDURES

The IRT model used to develop, calibrate, equate, and scale the Virginia *SOL* assessments was the *Rasch model* (Rasch, 1980) and its polytomous extension, the *Masters Partial Credit model* (PCM) (Masters, 1982). Both of these measurement models have been used for some time to construct test forms, for scaling and equating, and to develop and maintain large item banks.

All test analyses, including item-fit analysis, scaling, equating, diagnosis, and performance prediction were accomplished within this framework. All analyses for the grades 5 and 8, and end-of-course writing tests were based on the Masters Partial Credit model; i.e., multiple-choice items and writing domain scores were combined to form a single scale, and items from different assessment modes and from different test forms were processed simultaneously. The statistical software used to calibrate, scale, and equate the *SOL* assessments included *SAS* (1989), *BIGSTEPS* (Linacre & Wright, 1991), and *TRIAN* (Rentz, 1980).

The technical note following this section outlines the formulation of the Rasch and Partial Credit models in greater detail.

3.1 Equating and Scale Score Derivation Procedures

Equating of operational test forms involved ensuring that all forms in a content area and grade level test (e.g., grade 3 Mathematics) are as equally difficult as possible, both within and across assessment administrations. By equating, students taking one form of a test were neither advantaged nor disadvantaged compared with students taking a different form of a test.

Equating of the *SOL* assessments involved the use of common items on each form of the test. Each test form contained a subset of items that was reproduced on every other test form for the same subject and grade. These items, called *linking items*, served as an anchor for comparison. Each time a new test form is constructed in the future, an attempt will be made to make the new form equal in difficulty to the previous form. This equating was accomplished through statistical procedures using data collected on items during field tests. The data collection design used was the Design IV procedure for common item, non-equivalent groups (Angoff, 1971).

For each test form at a given grade level and content area, the Rasch model was applied in order to obtain parameter estimates for both the unique items on each form, as well as the linking items. The parameter estimates for each form were placed on a common metric by using the Rasch equating constant procedure (Wright & Stone, 1979). This resulted in the item parameters for *all* forms being on the same Rasch ability scale. A consequence of this was that, given an ability estimate θ_n , it was possible to determine scores on different forms that could be considered equivalent.

The final step consisted of obtaining for each raw score point on a form the Rasch ability score or theta corresponding to it. This was done by iteratively solving the expression

$$\eta = \sum_{i=1}^I P_{nxi}(\theta_n) \quad (3.1)$$

where η is the true score associated with student n of ability θ_n , and $P_{nxi}(\theta_n)$ is the probability of a correct response for the PCM for each of the I items and/or task-steps on the form.

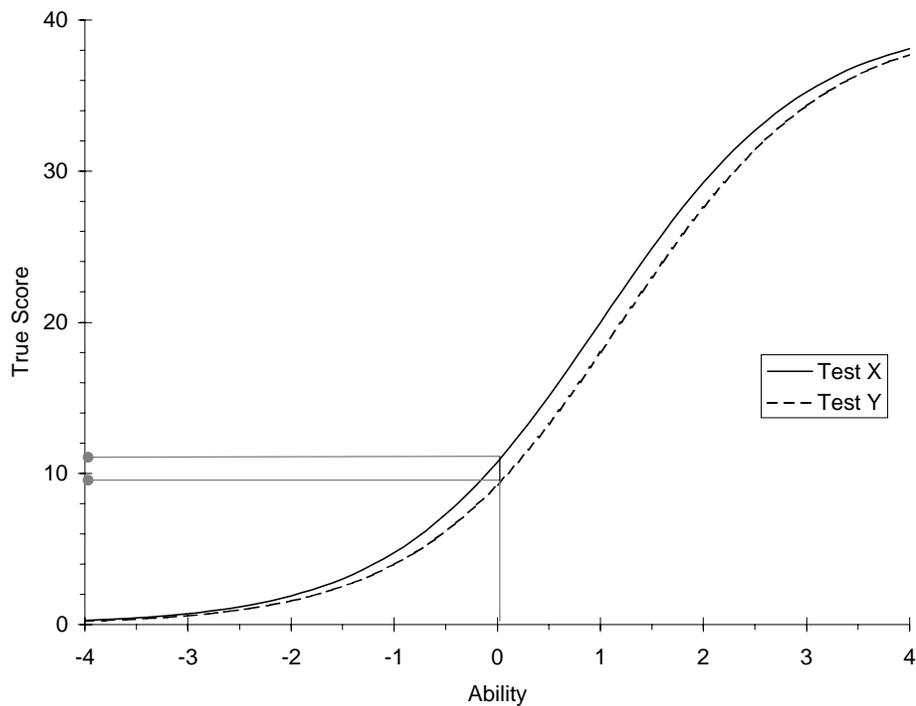


Figure 3.1 True Score Equating

Figure 3.1 illustrates these ideas for two hypothetical test forms, X and Y. In this figure, the true scores on each of the forms are plotted against Rasch ability using Equation 3.1. By drawing a line from the Rasch ability (here shown for an ability of 0) to each of the respective curves, and moving across to the true score scale, one can find the pairs of true scores that are equated to one another. According to Lord and Wingersky (1983), the procedure applied to true scores can safely be transferred to observed scores without any major anomalies in the resulting outcomes.

All post-equating on live test forms was carried out at the total score level, while pre-equating of forms was conducted at the reporting category level. Consequently, as new test forms are developed, they will be of approximate equal difficulty at the reporting category level. Data from these analyses were also used for item review by members of the Content Review Committees.

In order to facilitate the use and interpretation of the *SOL* assessment results, various scale scores were derived for reporting purposes.

Scale Scores for Content Areas

To accomplish the transformation, two levels, d_1 and d_2 , were selected on the Rasch ability or theta scale corresponding to standards-referenced criteria. These values were converted to the new scale at easy-to-remember locations, D_1 and D_2 . Specifically, $D_1 = 400$ was linked to the cutpoint between *Below Proficient* and *Proficient*, and $D_2 = 500$ was linked with the cut scores between *Proficient* and *Advanced*. Since d_1 and d_2 were criterion values on the theta scale, and D_1 and D_2 were the values on the new scale, the linear transformation (see Wright & Stone, 1979) was given by:

$$\text{ScaleScore} = \alpha + \gamma \cdot \text{Theta} \quad (3.2)$$

where the slope of the linear transformation is

$$\alpha = (D_1 d_2 - D_2 d_1) / (d_2 - d_1) \quad (3.3)$$

and the intercept is

$$\gamma = (D_2 - D_1) / (d_2 - d_1). \quad (3.4)$$

This transformation preserved the standards-referenced interpretation of the scale scores by being explicitly linked to the standards-referenced cut scores obtained from the Virginia *SOL* assessment standard setting. In other words, regardless of what form or administration year of the *SOL* assessment, a student would require the same level of ability to obtain a scale score of 400 for proficiency, and a scale score of 500 for advanced. Note that, while the scale scores can be used for comparisons *within* an *SOL* assessment, they cannot be compared *across* different *SOL* assessment content areas.

It also should be noted that scale scores represent a non-linear transformation of the raw scores from which they were obtained. That is, the distance between scale scores does not remain the same for each change in the raw scores. Typically, for the middle of the scale (around the 350 to 400 range), the increments are smaller than near the top or bottom of the scale. To complete the scale, a scale score of 0 was set to correspond to a raw score of 0, and a scale score of 600 was set to correspond to a perfect raw score.

Scale Scores for Reporting Categories

Scale scores for Reporting Categories in the 1998 *SOL* administration were calculated to provide a norm-referenced interpretation¹⁰.

First, the mean and standard deviation of the theta distribution of each reporting category¹¹ was calculated. Next, these values were used to convert each student's Rasch ability or theta to an intermediate scale with a mean of 0 and a standard deviation of 1 by:

$$Z_{98} = (\text{Theta} - \text{Mean}_{98}) / \text{SD}_{98} \quad (3.5)$$

¹⁰ In all future *SOL* assessments, scale scores for reporting categories will be standards-referenced. These scales will be developed in a process similar to the one used for the content area scale scores.

¹¹ This is a clarification of the original description of the reporting category scale scores in the *1998 Virginia Technical Report* (2000), which had the mean and standard deviation calculated from the "content area" rather than "reporting category."

The final scale for the reporting categories was obtained by converting the intermediate scale to a scale with a mean of 35 and a standard deviation of 5 by:

$$\text{ReportingCategoryScaleScore} = 5 \cdot Z_{98} + 35. \quad (3.6)$$

3.2 Item Bank Construction

The number of test forms to be constructed each year and the need to replace items that would be released to the public necessitated the availability of a large pool of items. The *SOL* item bank was maintained by Harcourt Educational Measurement both in the form of a computer file and a paper copy, making test items readily available to both Harcourt and VDOE staff for reference, test construction, test booklet design, and printing.

Harcourt Educational Measurement maintains a computerized statistical item bank to store supporting and identification information on each item. The information stored in this item bank includes each item's code number, grade level, content area, *SOL* and reporting category, field test date, test form, and item statistics. The statistical item bank also contains information that resulted from data review meetings. This item statistic information was used during test construction to calculate and adjust for test difficulty, content coverage, and pre-equating test forms, and to print individual test statistics as needed.

After the spring 1998 operational administration of the *SOL* assessments, the item bank Rasch scale statistics were re-calibrated using all of the student responses. The re-calibrated scale will serve as the base scale. Standards were set using the 1998 forms as the base year, and future administrations of the tests will be equated to the scales from the base year administration using a common item non-equivalent groups design.

3.3 Technical Note: The Rasch and Partial Credit IRT Models

The most basic expression of the Rasch model is in the Item Characteristic Curves (ICC). Item Characteristic Curves are a function of the probability of a correct response to an item at a specified ability level. The probability of a correct response is bounded by 1 (certainty of a correct response) and 0 (certainty of an incorrect response). The ability scale is, in theory, unbounded. In practice, the ability scale ranges from -3 to +3 logits for heterogeneous ability groups. A logit (natural log odds of a correct response) of zero typically represents “average” ability.

In Figure 3.2, a person whose ability falls at -1 on the ability (horizontal) scale has a probability of roughly 20% of answering the item correctly. Another way of expressing this is that if we have a group of 100 people, all of whom have an ability of -1, we would expect about 20% of them to answer the item correctly. Similarly, a person whose ability was at +1 would have about a 70% chance of getting the item right. Thus, a person whose ability is above average is more likely to answer the item correctly than is one whose ability is below average. This makes intuitive sense and is the basic formulation of Rasch measurement for test items having only 2 possible categories (i.e., wrong or right).

To extend the formulation, consider that the Item Characteristic Curve shown here represents the Rasch expression that relates a person’s ability to the probability of a correct response to a given item. One might ask what sort of curve would represent the other possible condition, that of answering the item incorrectly. Intuitively, it would seem that if one has a probability of 70% of getting the answer right at an ability level of 1, then the probability of getting it wrong is 30%; at -1 on the ability scale, the probability of answering incorrectly is 80%. Thus, the less ability one has, the more likely he or she is to answer a test item incorrectly. This relationship is depicted in Figure 3.3.

The key step in the formulation, and the point at which the Rasch dichotomous model merges with the Partial Credit model, requires us to posit an additional response category. Suppose that, rather than scoring items as completely wrong or completely right, we add a category representing answers that, though not totally correct, are still clearly not totally incorrect. These relationships are shown in Figure 3.4.

The left-most curve in Figure 3.4 represents the distribution of ability for all people getting a score of “0” (completely incorrect) on the item. Those of very low ability (e.g., -3 to -2) are very likely to be in this category and, in fact, are more likely to be in this category than the other two. Those receiving a “1” tend to fall in the middle range of abilities (the middle curve). The final, right-most curve represents the distribution of abilities for those receiving scores of “2” (completely correct). Very high-ability people are clearly more likely to be in this category than in any other, but there are still some of average and low ability who can get full credit for the item.

Although the actual computations are quite complex, the points at which lines cross each other have a similar interpretation as for the dichotomous case. Consider the point at which the category 1 line crosses the category 2 line. For abilities to the left of (or less than) this point, the probability is greatest for a category 1 response. To the right of (or above) this point, and up to the point at which the lines cross for categories 2 and 3, the most likely response is category 2.

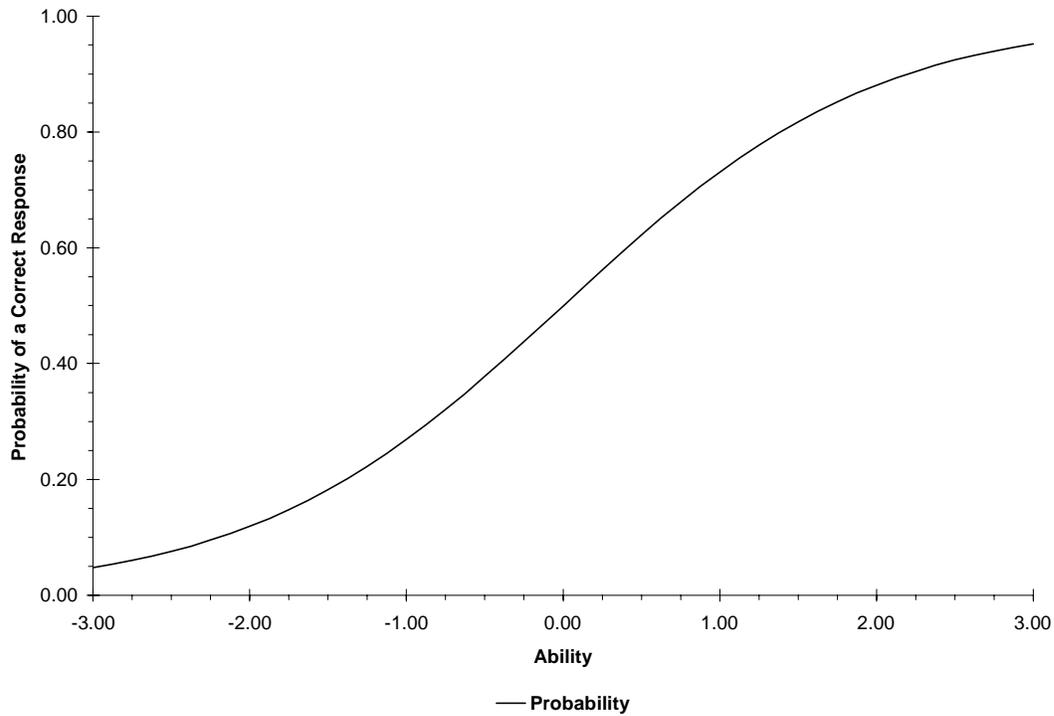


Figure 3.2 Sample item characteristic curve.

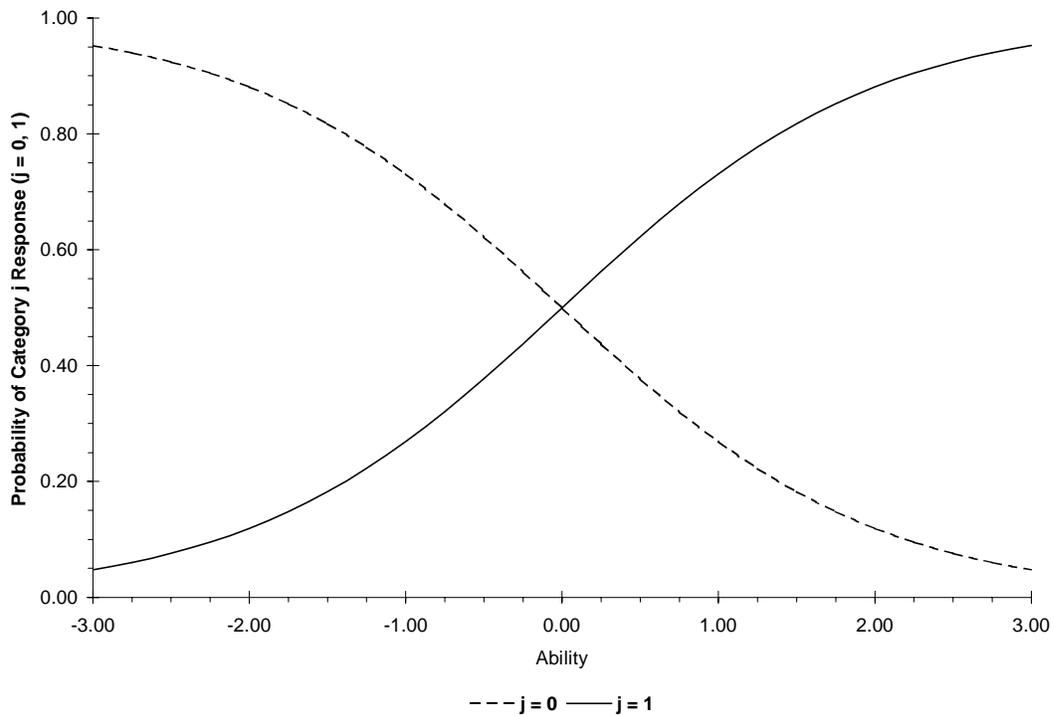


Figure 3.3 Category curves for a one-step item.

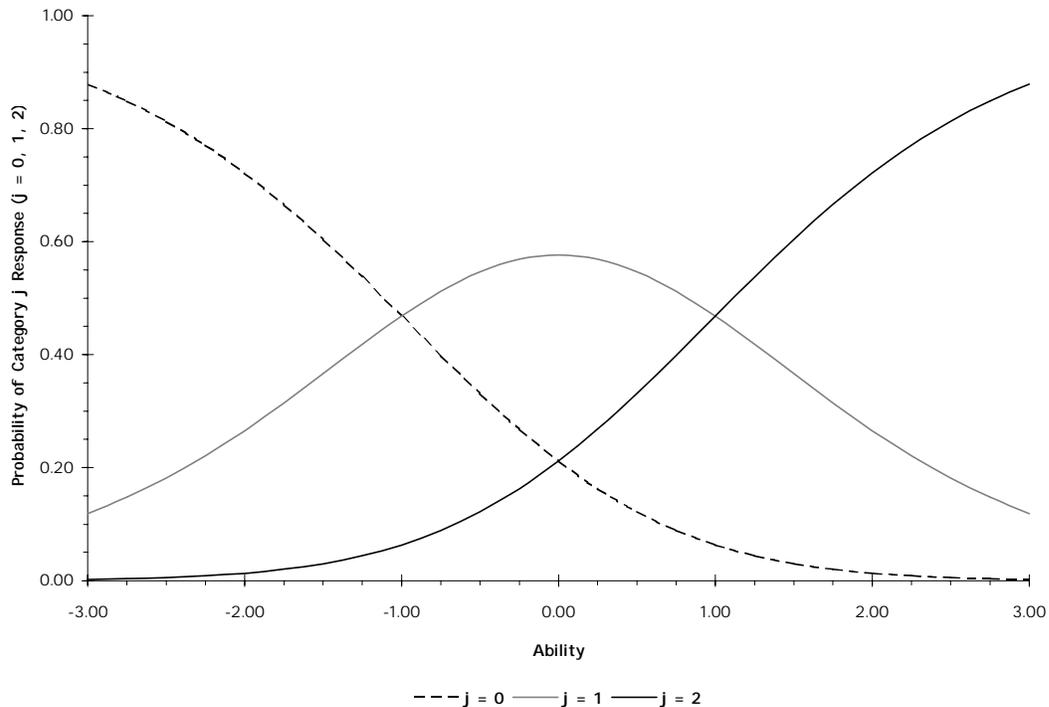


Figure 3.4 Category curves for a two-step item.

Note that the likelihood of a category 2 response declines in both directions as ability decreases to the low extreme or increases to the high extreme. These points then may be thought of as the difficulties of crossing the “steps” between categories.

The most salient implication of the formulation can be summarized as follows. If the commonly used Rasch model applied to dichotomously (right/wrong) scored items can be thought of as simply a special case of the Masters Partial Credit model (applying to “one-step” items), then the act of scaling multiple-choice or “one-step” items together with “multi-step” items, whether they have two, three, or ten steps, is a straightforward process of applying the measurement model. The quality of the scaling then can be assessed in terms of known procedures.

For open-ended items that were not scored dichotomously (such as the *SOL* writing assessments), Harcourt Educational Measurement used the Masters Partial Credit Model. If the commonly used Rasch model applied to dichotomously (right/wrong) scored items can be thought of as simply a special case of the PCM (applying to “one-step” items), then the act of scaling multiple-choice or “one-step” items together with “multi-step” items, whether they have two, three, or ten steps, is a straightforward process of applying the measurement model.

One important property of the PCM is the separability of estimation of item/task parameters and person parameters. With the PCM, as with the Rasch model, the total score given by the sum of the categories in which a person responds is a sufficient statistic for estimating person ability (i.e., no additional information need be estimated). The total number of responses across examinees in a particular category is a sufficient statistic for estimating the step difficulty for that category. This is an important distinguishing feature of the PCM from other polytomous IRT models, such as the Graded Response model (GRM) (Samejima, 1969) or other extensions of

GRM in which person ability is estimated over all possible response patterns and item/task difficulties are weighted by item discrimination.

With PCM, the same total score will yield the same ability estimate for different examinees. With GRM, the same total raw score may yield different ability estimates, depending on the response patterns of the examinees (“pattern scoring”). In practical testing situations that involve the interpretation of scores on a test by the students, parents, and teachers, it is desirable for the same total score to have the same meaning. The PCM is the only measurement model allowing for such interpretation.

Sensitivity is another useful characteristic of the PCM. The Rasch model and its extensions are more sensitive to departure from unidimensionality than other polytomous models. For Rasch model proponents, significant variation of item discrimination is indicative of a dimensionality problem, rather than a purely psychometric phenomenon. Significant variation in item/task discrimination implies that the items are not rank-ordering examinees in the same way they should for a unidimensional instrument. The Rasch model and the PCM identify as misfitting an item with a significant departure from the expected level of discrimination so that judgments can be made regarding the extent to which that element of the assessment fairly measures student performance.

The PCM is a direct extension of the dichotomous one-parameter item response theory (IRT) model developed by Rasch in the 1950s (Rasch, 1980). For an item/task involving m score categories, one general expression for the probability of person n scoring x on item/task i is given by

$$P_{nxi} = \frac{\exp \sum_{j=0}^x (B_n - D_{ij})}{\sum_{k=0}^{m_i} \exp \sum_{j=0}^k (B_n - D_{ij})}$$

where $x = 0, 1, \dots, m_i$, and by definition,

$$\sum_{j=0}^0 (B_n - D_{ij}) = 0$$

The above equation gives “the probability of scoring x on the m -th step of item/task i as a function of the person’s position B_n on the variable (i.e., ability) and the difficulty of the m steps of item/task i ” (Masters, 1982).

According to this model, the probability of an examinee scoring in a particular category (step) is the sum of the logit (log-odds) differences between B_n and D_{ij} of all the completed steps, divided by the sum of the differences of all the steps of an item. Thissen and Steinberg (1986) refer to this model as a divide-by-total model. The parameters estimated by this model are (1) an ability estimate for each person (or ability estimate at each raw score level) and (2) m step (difficulty) estimates for each item/task with $m + 1$ score categories.

4. CHANGES AND DEVELOPMENTS IN THE 1998-1999 SOL ADMINISTRATION CYCLE

4.1 The Scoring of Writing Prompts

Just prior to the 1998-1999 SOL administration cycle, the scoring of the direct-writing assessments became the responsibility of National Computing Systems (NCS)¹². In general, NCS followed the procedures outlined in Section 2.4 of this report. This section provides additional details regarding the scoring of the direct-writing assessments by NCS.

Selection of Training Materials and Anchor Papers

Field test papers from the writing prompts that were to be scored during a 1998-1999 administration were sent to NCS from Harcourt Educational Measurement. At NCS, scoring directors read through 200 to 300 sample student papers and assigned tentative scores after reviewing anchor papers from previous administrations. The scoring directors then assembled proposed sets of anchor papers and training papers for the process of *rangefinding* (see Section 2.4). During the three-day rangefinding session, committees consisting of Virginia Department of Education staff and Virginia classroom teachers approved the proposed anchor/training papers, or replaced them with new anchor/training papers to better reflect the scoring rubrics for the writing domains. All anchor/training papers, assigned scores, and replacement papers were reviewed and approved by the Virginia Department of Education.

The Training and Qualifying of Readers

All scorers (called *readers* at NCS) were required to have, at a minimum, a 4-year college degree such as a B.A. Comprehensive training was required for all readers. For the Virginia *SOL* direct-writing assessment, this was carried out in two stages. First, the scorers were trained to score each of the three domains of the writing assessment: Composing, Written Expression, Usage/Mechanics. After each separate domain training, readers were trained to assign all three scores during “All Domain” training.

Following this training, the readers were required to pass *qualifying sets* consisting of sets of pre-scored papers. All readers were required to achieve at least two instances of 70% perfect agreement in each domain with the previously scored papers in the qualifying sets, before they were allowed to score the *SOL* direct-writing assessment. A breakdown of the training materials and qualifying sets is shown in Table 4.1.1.

Table 4.1.1 Breakdown of Training Materials and Qualifying Sets

Writing Domain	Numbers of Sets (Papers Per Set)		
	Anchor	Training	Qualifying
Composing	1 (10 – 16)	1 (10)	4 (10)
Written Expression	1 (10 – 16)	1 (10)	4 (10)
Usage/Mechanics	1 (10 – 16)	1 (10)	4 (10)
All Domains		3 (10)	4 (10)

¹² National Computing Systems was acquired by Pearson PLC in a July 2000 merger. The new company is now named NCS Pearson.

In addition to the regular pool of readers, *scoring supervisors* were trained by NCS in order to oversee the training of readers and the scoring of the direct-writing assessments. The supervisors were selected based on their previous experience, an interview with the prospective candidate, an evaluation of a writing sample by the candidate, a grammar test, and satisfactorily high agreement percentages in previous training and scoring. All supervisors received 3-4 days of additional training prior to the training of the readers to score the *SOL* direct-writing assessments.

Quality Control Procedures

Several quality control procedures were used by NCS to ensure the accurate and consistent scoring of the *SOL* direct-writing assessments. *Backreading* (that is, the re-reading and re-scoring of papers) was performed by scoring supervisors in order to check the scores of readers and provide feedback. In conjunction with the backreading, NCS also used *inter-rater reliability* and *calibration set reports* to monitor the readers.

Inter-rater reliabilities were calculated for pairs of readers who independently and “blindly” scored the same set of papers. When two raters assigned the same score to a student’s paper, the scores were said to be in *exact* or *perfect agreement*. Scores that differed by one score point were said to be *adjacent*, while scores that differed by two or more score points were said to be *non-adjacent*. All non-adjacent scores were resolved by a scoring supervisor.

Calibration sets consisted of sets of five pre-scored papers assembled by the NCS scoring directors (and approved by the Virginia Department of Education) and administered to each reader for each day the reader was scoring the *SOL* direct-writing assessment. Readers’ scores on the calibration sets were collected, and daily and cumulative agreement rates were calculated. After each reader and supervisor had scored the calibration set for that day, and all of the data accumulated, the papers were discussed at the room level, with a scoring director articulating the “true scores” on the papers in order to calibrate the readers.

These reports, along with “Scorer Intervention Logs” that detailed the actions NCS had taken to retrain problematic readers, were sent to the Virginia Department of Education on a daily basis. Readers showing unacceptable performance based on the results of these were given individualized training. Specific expectations and time frames for improvement were given, and subsequent scoring was thoroughly reviewed. If readers failed to show acceptable improvement, they were released from scoring the *SOL* direct-writing assessments.

4.2 Development of New Reporting Category Scale Scores

Scale scores for reporting categories in the 1998 *SOL* administration were calculated to provide a norm-referenced interpretation. For the fall 1998, spring 1999, and subsequent administrations, this interpretation was changed to provide a *standards-referenced* score interpretation.

For the original norm-referenced scale scores, the mean and standard deviation of the theta distribution of each reporting category was calculated for the spring 1998 administration. Next, these values were used to convert each student's Rasch ability or theta to an intermediate scale with a mean of 0 and a standard deviation of 1 by

$$Z_{98} = (Theta - Mean_{98}) / SD_{98}.$$

The final scale for the reporting categories was obtained by converting the intermediate scale to a scale with a mean of 35 and a standard deviation of 5 by

$$OldReportingCategoryScaleScore = 5 \cdot Z_{98} + 35.$$

The new scale for reporting categories followed a slightly different derivation. First, the proficiency cut score on the theta metric for the content area to which the given reporting category belonged was obtained, together with the standard deviation of the theta distribution for reporting category for the spring 1998 distribution. Next, these values are used to convert each student's Rasch ability or theta to an intermediate scale by

$$Y = (Theta - ProficiencyCutScoreTheta) / SD_{98}.$$

Note that in this intermediate metric, students' thetas are referenced to the proficiency cut score rather than to the mean. The final scale¹³ for the reporting categories was obtained by converting the intermediate scale to a scale with a mean of 30 and a standard deviation of 7 by

$$NewReportingCategoryScaleScore = 7 \cdot Y + 30.$$

Conversion tables showing the old reporting category scale scores with the new reporting category scale scores for the spring 1998 administration are show in Appendix A of this report. The conversion tables for the multiple-choice assessments are presented first, and followed by the conversion tables for the direct-writing assessments.

¹³ The new mean and standard deviation were chosen to reflect the fact that the reporting category scale had changed.

5. OVERVIEW OF STATISTICAL SUMMARIES

This section presents an overview of the statistical summaries for the 1998-1999 Virginia *SOL* assessment cycle. The statistics described in this section are presented in sections 6 and 7 of this report, and in a separate set of appendices. Selected results for the fall 1998 *SOL* administration are presented in Section 6. All of the results from the analyses described below were performed for the spring 1999 *SOL* administration and are presented in Section 7. Together, these sections provide the details of the psychometric and statistical analyses performed after the administration of the *SOL* assessments in the 1998-1999 cycle.

In general, analyses are provided for both the writing assessments in grades 5, 8, and end-of-course, and the multiple-choice assessments at grades 3, 5, 8, and end-of-course. For the writing assessments, analyses are provided for each combination of multiple-choice section and writing prompt. Analyses for the multiple-choice assessments are presented for both the Core 1 (“Main”) and Core 2 (“Makeup”) forms of the assessments. The tables of the statistical summary are numbered consecutively within the sub-section in which they appear. Thus, Table 6.1.1 is the first table within Section 6.1. The tables in the sub-sections of 6 and 7 are also numbered to match the sub-sections of this overview.

5.1 Administration Results

These tables show the percentages of students failing, passing (proficient), and passing (advanced) for each of the *SOL* assessments in the fall 1998 and spring 1999 administrations. These tables are located in Sections 6.1 and 7.1 respectively.

5.2 Reliabilities and Scale Score Descriptive Statistics

The first set of tables present the raw score statistics and reliabilities for each grade and form of the multiple-choice *SOL* assessments, and include:

- the number of items;
- the numbers of students¹⁴;
- the means and standard deviations of the students’ scale scores;
- the *Kuder-Richardson Formula 20* (KR20) internal consistency reliability estimate (Crocker & Algina, 1987, p. 139);
- the standard error of measurement;
- the mean raw score as a proportion of the maximum obtainable score; and
- the conditional standard errors of measurement for the proficient and advanced cut scores.

Results for spring 1999 are presented in Tables 7.2.1 through 7.2.4.

¹⁴ Note the numbers of students reported in these tables may be lower than the totals reported in the statewide summaries. These differences are to the inclusion of all student results in the state summaries and the exclusion of incomplete student results in the statistical summaries. **In general, students who have scores of zero or with incomplete data responses were deleted from all analysis.**

The second set of tables present the statistics for the grades 5, 8, and end-of-course writing assessments, and include:

- the specific combination of writing prompt and multiple-choice section that was administered;
- the number of items that were on the writing assessment;
- the maximum obtainable raw score possible for the writing assessment;
- the numbers of students;
- the means and standard deviations of the students' scale scores;
- the *coefficient alpha* internal consistency reliability estimate (Crocker & Algina, 1987, p. 138);
- the standard error of measurement;
- the mean raw score as a proportion of the maximum obtainable score; and
- the conditional standard errors of measurement for the proficient and advanced cut scores.

Results for spring 1999 are presented in Tables 7.2.5 through 7.2.7.

Additional statistical information regarding the multiple-choice and writing assessments can be found in the following appendices:

Appendix B provides frequency distributions and histograms of the scale scores of the *SOL* assessments. Grades 3, 5, 8, and end-of-course multiple-choice assessments are presented first, and are followed by the grade 5, 8, and end-of-course writing assessments.

Appendix C presents the item analyses for the multiple-choice and direct-writing assessments. For each multiple-choice item, the statistics include the *p*-value, point-biserial correlation, Rasch difficulty estimate, and the standard error of the Rasch difficulty. The *p*-values for the domain scores of the direct-writing assessments are calculated as modified proportions of the maximum obtainable domain scores, in order for them to be comparable to the multiple-choice *p*-values. Analyses are presented for all core forms for the spring administration, but only core 1 forms are presented for the fall administration. Core 2 forms for the fall administration are reprints of previously administered tests.

5.3 Correlations

These tables present the correlation matrix of the scale scores for each set of multiple-choice *SOL* assessments in grades 3, 5, and 8. In each table, the intercorrelations for the Core 1 forms of the set of assessments are above the main diagonal, while the intercorrelations for the Core 2 forms are below the main diagonal. Results for spring 1999 are presented in Tables 7.3.1 through 7.3.3.

5.4 Decision Consistency and Accuracy at the Pass (Proficient) Cut Scores

These tables present the results of a set of analyses that were performed to estimate the accuracy and consistency of decisions based on the cut scores for passing (proficient) on the Virginia *SOL* assessments. These analyses make use of the methods outlined and implemented in Livingston and Lewis (1995), Haertel (1996), and Young and Yoon (1998).

The *accuracy* of a decision is the extent to which it would agree with the decisions that would be made if each student could somehow be tested with all possible parallel forms of the assessment that were used. The *consistency* of a decision is the extent to which it would agree with the decisions that would be made if the students had taken a different form of the examination, equal in difficulty and covering the same content as the form they actually took. Students can be misclassified in one of two ways. Students who were truly below a proficiency cutpoint, but were classified on the basis of the assessment as being above a cutpoint, are considered to be *false positives*. In a similar fashion, students who were truly above a proficiency cutpoint, but were classified as being below a cutpoint, are considered to be *false negatives*.

For each *SOL* multiple-choice and writing assessment, these tables include:

- the proportion of consistent classifications;
- the proportion of accurate classifications;
- the proportion of false positives;
- the proportion of false negatives.

Note that these tables follow the general rule that decision consistency will be less than decision accuracy.

Results for spring 1999 are presented in Tables 7.4.1 through 7.4.7.

5.5 Inter-Rater Reliability

Results for spring 1999 concerning inter-rater reliability are found in Table 7.5.1. As described above (Sections 2.3, 3.1), each writing prompt was read and scored by two independent raters. When the two raters assigned the same score to a student's paper, the scores were said to be in *exact agreement*. Scores that differed by exactly one score point were said to be *adjacent*, while scores that differed by two or more score points were said to be *non-adjacent*. All papers that were non-adjacent were reviewed by the room directors before a final score was assigned.

This table¹⁵ includes:

- the writing prompt and writing domain score;
- the numbers of students for which the writing domain inter-rater reliabilities were calculated; and
- the percentages of papers that were in exact agreement, adjacent, or non-adjacent.

5.6 Scaling and Equating

Raw score to scale score conversion tables are presented for the fall 1998 (Tables 6.6.1 to 6.6.10) and the spring 1999 (Tables 7.6.1 to 7.6.27) administrations. Tables for the multiple-choice assessments are followed by tables for the direct-writing assessments within each grade. Included with these tables are the conditional standard errors for the scale scores.

¹⁵ For the 1998-1999 administration cycle, results were obtainable only for the spring 1999 high school end-of-course direct-writing assessment.

6. FALL 1998 STATISTICAL SUMMARY

Table 6.1.1 Fall 1998 Virginia SOL Assessments: Assessment Pass Rates

Standards of Learning Assessment	% Fail	% Pass		
		Proficient	Advanced	Overall
Grade 8				
English: Reading/Lit. & Research	40	48	12	60
English: Writing	40	56	4	60
Mathematics	55	42	2	44
History & Social Science	78	22	0	22
Science	36	61	4	65
Computer/Technology	32	62	6	68
High School End-of-Course				
English: Reading/Lit. & Research	37	55	8	63
English: Writing	44	52	5	60
Algebra I	65	35	0	35
Geometry	56	42	2	44
Algebra II	68	30	2	32
United States History	82	17	1	18
Wrld. Hist. to 1000 A.D./ W. Geog.	48	51	2	53
Wrld. Hist. From 1000 A.D./ W. Geog.	67	32	1	33
Earth Science	50	48	2	50
Biology	31	66	3	69
Chemistry	52	47	0	47

Note: Percentages may not add to 100% due to rounding

**Table 6.6.1 Fall 1998 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:
High School End-of-Course English: Reading/Literature and Research**

Raw Score	Core 1	
	Scale Score	Standard Error
0	0	55
1	160	55
2	201	40
3	225	33
4	243	29
5	258	27
6	271	25
7	282	24
8	292	22
9	301	22
10	310	21
11	318	20
12	325	20
13	332	19
14	339	19
15	346	19
16	352	19
17	359	18
18	365	18
19	371	18
20	377	18
21	383	18
22	389	18
23	395	18
24	401	18
25	407	18
26	413	18
27	419	18
28	426	19
29	432	19
30	439	19
31	446	20
32	453	20
33	461	21
34	470	22
35	480	23
36	490	25
37	502	26
38	516	29
39	533	33
40	557	39
41	596	55
42	600	55

**Table 6.6.2 Fall 1998 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:
High School End-of-Course Algebra I**

Raw Score	Core 1	
	Scale Score	Standard Error
0	0	45
1	212	45
2	244	32
3	263	27
4	277	24
5	289	21
6	298	20
7	306	19
8	313	18
9	321	17
10	326	16
11	332	16
12	337	15
13	343	15
14	348	15
15	352	14
16	357	14
17	361	14
18	365	14
19	369	14
20	374	13
21	378	13
22	382	13
23	385	13
24	389	13
25	393	13
26	397	13
27	401	13
28	405	13
29	409	13
30	413	13
31	417	14
32	421	14
33	426	14
34	430	14
35	435	14
36	439	15
37	444	15
38	449	15
39	455	16
40	461	16
41	466	17
42	473	18
43	481	19
44	489	20
45	498	21
46	509	24
47	524	27
48	543	32
49	575	45
50	600	45

**Table 6.6.3 Fall 1998 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:
High School End-of-Course Geometry**

Raw Score	Core 1	
	Scale Score	Standard Error
0	0	49
1	177	49
2	213	36
3	235	30
4	251	26
5	264	24
6	275	22
7	285	21
8	293	20
9	301	19
10	308	18
11	315	18
12	322	17
13	328	17
14	334	17
15	339	16
16	345	16
17	350	16
18	355	16
19	360	15
20	365	15
21	370	15
22	375	15
23	380	15
24	385	15
25	390	15
26	395	15
27	400	15
28	405	16
29	410	16
30	415	16
31	421	16
32	426	16
33	432	17
34	438	17
35	444	18
36	452	19
37	459	19
38	467	20
39	476	22
40	487	23
41	499	26
42	514	29
43	536	35
44	571	49
45	600	49

**Table 6.6.4 Fall 1998 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:
High School End-of-Course Algebra II**

Raw Score	Core 1	
	Scale Score	Standard Error
0	0	56
1	141	56
2	181	40
3	205	34
4	223	29
5	237	27
6	250	25
7	260	23
8	269	22
9	278	21
10	285	20
11	293	20
12	300	19
13	306	19
14	313	18
15	318	18
16	324	18
17	330	18
18	335	17
19	340	17
20	346	17
21	351	17
22	356	17
23	361	17
24	366	17
25	371	17
26	376	17
27	380	17
28	385	17
29	390	17
30	395	17
31	400	17
32	406	17
33	411	17
34	416	18
35	422	18
36	428	18
37	434	19
38	441	19
39	447	19
40	455	20
41	462	21
42	471	22
43	480	23
44	490	25
45	502	27
46	516	29
47	534	33
48	557	40
49	598	56
50	600	56

**Table 6.6.5 Fall 1998 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:
High School End-of-Course U.S. History**

Raw Score	Core 1	
	Scale Score	Standard Error
0	0	61
1	91	61
2	134	44
3	161	37
4	180	32
5	196	29
6	208	27
7	220	25
8	229	24
9	238	23
10	246	22
11	254	21
12	261	20
13	268	20
14	274	19
15	281	19
16	286	19
17	292	18
18	297	18
19	302	17
20	307	17
21	313	17
22	317	17
23	322	17
24	326	17
25	331	17
26	336	17
27	340	16
28	345	16
29	349	16
30	354	16
31	358	16
32	363	16
33	367	16
34	372	16
35	376	16
36	381	17
37	385	17
38	390	17
39	395	17
40	399	17
41	404	17
42	410	17
43	414	17
44	420	18
45	425	18
46	431	19
47	437	19
48	443	20
49	449	20
50	457	21
51	464	22
52	472	22
53	481	23
54	490	25
55	501	27
56	514	29
57	528	32
58	548	36
59	573	43
60	598	61
61	600	61

**Table 6.6.6 Fall 1998 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:
High School End-of-Course World History to 1000 A.D./World Geography**

Raw Score	Core 1	
	Scale Score	Standard Error
0	0	45
1	200	45
2	232	32
3	252	27
4	266	24
5	277	22
6	286	20
7	294	18
8	301	17
9	308	17
10	313	16
11	319	15
12	324	15
13	329	14
14	334	14
15	338	14
16	342	13
17	346	13
18	350	13
19	354	13
20	357	13
21	361	13
22	365	13
23	368	13
24	372	12
25	375	12
26	378	12
27	382	12
28	385	12
29	388	12
30	391	12
31	395	12
32	398	12
33	401	12
34	404	12
35	408	12
36	411	12
37	414	12
38	418	13
39	421	13
40	425	13
41	428	13
42	432	13
43	435	13
44	440	13
45	444	13
46	448	14
47	452	14
48	457	14
49	461	15
50	466	15
51	472	16
52	478	17
53	484	17
54	492	18
55	500	20
56	509	22
57	520	23
58	534	27
59	553	32
60	586	45
61	600	45

**Table 6.6.7 Fall 1998 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:
High School End-of-Course World History From 1000 A.D./ World Geography**

Raw Score	Core 1	
	Scale Score	Standard Error
0	0	50
1	174	50
2	209	35
3	230	29
4	246	26
5	258	23
6	268	21
7	277	20
8	284	19
9	292	18
10	298	17
11	304	17
12	310	16
13	315	16
14	320	16
15	324	15
16	329	15
17	333	15
18	337	14
19	342	14
20	346	14
21	349	14
22	353	14
23	357	13
24	360	13
25	364	13
26	367	13
27	371	13
28	374	13
29	378	13
30	381	13
31	384	13
32	388	13
33	391	13
34	394	13
35	398	13
36	401	13
37	404	13
38	408	13
39	412	13
40	415	13
41	418	13
42	422	14
43	426	14
44	430	14
45	434	14
46	438	14
47	442	15
48	447	15
49	451	15
50	456	16
51	461	16
52	467	17
53	473	17
54	479	18
55	486	19
56	493	20
57	502	21
58	512	23
59	524	25
60	539	29
61	560	35
62	595	49
63	600	49

**Table 6.6.8 Fall 1998 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:
High School End-of-Course Earth Science**

Raw Score	Core 1	
	Scale Score	Standard Error
0	0	52
1	166	52
2	204	38
3	227	31
4	243	28
5	257	25
6	268	23
7	278	22
8	287	21
9	295	20
10	302	19
11	309	18
12	316	18
13	322	17
14	327	17
15	333	17
16	339	16
17	344	16
18	349	16
19	354	16
20	359	16
21	364	16
22	368	15
23	373	15
24	378	15
25	382	15
26	387	15
27	392	15
28	397	15
29	401	15
30	406	16
31	411	16
32	416	16
33	421	16
34	426	16
35	431	17
36	437	17
37	442	17
38	448	18
39	455	18
40	461	19
41	468	19
42	476	21
43	485	22
44	495	23
45	505	25
46	519	27
47	535	31
48	557	37
49	594	52
50	600	52

**Table 6.6.9 Fall 1998 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:
High School End-of-Course Biology**

Raw Score	Core 1	
	Scale Score	Standard Error
0	0	45
1	196	45
2	231	33
3	252	28
4	268	25
5	281	23
6	292	21
7	301	19
8	310	19
9	317	18
10	324	17
11	330	16
12	336	16
13	342	16
14	347	15
15	352	15
16	357	14
17	362	14
18	367	14
19	371	14
20	375	13
21	380	13
22	384	13
23	388	13
24	392	13
25	396	13
26	400	13
27	404	13
28	408	13
29	412	13
30	416	13
31	420	13
32	424	13
33	429	14
34	433	14
35	438	14
36	442	14
37	447	15
38	452	15
39	458	16
40	463	16
41	469	16
42	476	17
43	483	18
44	491	19
45	500	21
46	511	23
47	525	26
48	544	32
49	575	44
50	600	44

**Table 6.6.10 Fall 1998 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:
High School End-of-Course Chemistry**

Raw Score	Core 1	
	Scale Score	Standard Error
0	0	45
1	206	45
2	238	32
3	258	27
4	272	23
5	283	21
6	293	20
7	301	19
8	309	18
9	315	17
10	322	16
11	327	16
12	333	15
13	338	15
14	343	15
15	348	15
16	353	14
17	357	14
18	361	14
19	365	14
20	370	14
21	374	14
22	378	13
23	382	13
24	386	13
25	390	13
26	394	13
27	398	13
28	402	13
29	406	14
30	410	14
31	414	14
32	419	14
33	423	14
34	428	14
35	433	15
36	437	15
37	442	15
38	447	15
39	453	16
40	459	16
41	465	17
42	472	18
43	480	19
44	487	20
45	497	21
46	509	23
47	523	27
48	542	32
49	574	45
50	600	45

7. SPRING 1999 STATISTICAL SUMMARY

Table 7.1.1 Spring 1999 Virginia SOL Assessments: Assessment Pass Rates

<i>Standards of Learning Assessment</i>	% Fail	% Pass		
		Proficient	Advanced	Overall
Grade 3				
English: Reading/Writing	39	50	11	61
Mathematics	32	46	22	68
History/Social Science	38	56	7	63
Science	32	52	16	68
Grade 5				
English: Reading/Lit. & Resrch.	31	53	17	70
English: Writing	19	62	18	80
Mathematics	49	42	8	50
History/Social Science	53	45	2	47
Science	33	62	5	67
Computer/Technology	19	62	19	81
Grade 8				
English: Reading/Lit. & Resrch.	33	51	16	67
English: Writing	30	61	9	70
Mathematics	43	51	6	57
History/Social Science	58	38	4	42
Science	22	66	12	78
Computer/Technology	28	63	9	72
High School End-of-Course				
English: Reading/Lit. & Resrch.	25	56	19	75
English: Writing	19	69	12	81
Algebra I	44	48	8	56
Geometry	38	55	7	62
Algebra II	49	45	7	52
United States History	68	29	3	32
Wrld. Hist. to 1000 A.D./W. Geog.	32	65	3	68
Wrld. Hist. From 1000 A.D./W. Geog.	53	43	4	47
Earth Science	35	60	6	66
Biology	19	74	7	81
Chemistry	36	60	4	64

Note: Percentages may not add to 100% due to rounding

**Table 7.2.1 Spring 1999 Virginia SOL Grade 3 Assessments:
Scale Score Summary and Reliabilities**

SOL Assessment	Form	No. of Items	N	Mean	SD	KR20	SEM	Prop. Max.	Conditional SEM	
									Prof. Cut	Adv. Cut
English: Reading/Lit. & Res.	Core 1	45	83,433	415.6	63.0	0.89	20.9	0.72	19	34
	Core 2	45	2,964	406.8	65.4	0.90	20.7	0.68	19	34
Mathematics	Core 1	50	83,904	437.8	81.3	0.89	27.0	0.72	24	34
	Core 2	50	2,996	432.0	76.8	0.88	26.6	0.71	24	34
History/Social Science	Core 1	40	83,735	416.4	55.7	0.86	20.8	0.66	18	32
	Core 2	40	2,993	410.4	60.7	0.88	21.0	0.65	18	32
Science	Core 1	40	83,663	431.2	65.4	0.85	25.3	0.72	22	33
	Core 2	40	2,992	435.5	67.2	0.86	25.1	0.74	22	33

**Table 7.2.2 Spring 1999 Virginia SOL Grade 5 Assessments:
Scale Score Summary and Reliabilities**

SOL Assessment	Form	No. of Items	N	Mean	SD	KR20	SEM	Prop. Max.	Conditional SEM	
									Prof. Cut	Adv. Cut
English: Reading/Lit. & Res.	Core 1	42	77,446	432.8	63.7	0.89	21.1	0.75	18	31
	Core 2	42	2,815	420.0	58.8	0.90	18.6	0.72	18	31
Mathematics	Core 1	50	77,710	407.0	60.9	0.90	19.3	0.66	17	28
	Core 2	50	2,838	396.7	52.1	0.87	18.8	0.63	17	28
History/Social Science	Core 1	40	77,693	397.2	50.4	0.85	19.5	0.64	18	37
	Core 2	40	2,836	382.3	50.2	0.86	18.8	0.59	18	37
Science	Core 1	40	77,687	421.0	50.0	0.82	21.2	0.72	17	36
	Core 2	40	2,837	408.5	44.0	0.81	19.2	0.69	18	36
Computer/Technology	Core 1	30	77,586	447.1	54.9	0.82	23.3	0.71	18	29
	Core 2	30	2,824	443.5	53.2	0.83	21.9	0.69	18	29

**Table 7.2.3 Spring 1999 Virginia SOL Grade 8 Assessments:
Scale Score Summary and Reliabilities**

SOL Assessment	Form	No. of Items	N	Mean	SD	KR20	SEM	Prop. Max.	Conditional SEM	
									Prof. Cut	Adv. Cut
English: Reading/Lit. & Res.	Core 1	42	73,702	429.6	73.1	0.88	25.3	0.71	22	35
	Core 2	42	2,586	410.2	77.7	0.90	24.6	0.69	22	35
	Core 3	42	3,419	442.7	68.7	0.87	24.8	0.72	22	31
Mathematics	Core 1	60	69,336	413.2	57.6	0.92	16.3	0.66	14	26
	Core 2	60	2,704	401.0	55.7	0.92	15.8	0.61	14	25
	Core 3	60	3,287	417.7	60.0	0.92	17.0	0.65	14	23
History/Social Science	Core 1	50	72,620	390.5	55.6	0.86	20.8	0.61	19	28
	Core 2	50	2,483	372.1	50.3	0.85	19.5	0.56	19	31
	Core 3	50	3,349	391.4	61.2	0.88	21.2	0.61	19	29
Science	Core 1	50	72,918	438.6	50.1	0.87	18.1	0.67	15	22
	Core 2	50	2,516	428.2	53.2	0.88	18.4	0.65	15	24
	Core 3	50	3,376	437.4	56.5	0.89	18.7	0.70	15	24
Computer/Technology	Core 1	40	73,145	430.2	58.2	0.84	23.3	0.72	20	34
	Core 2	40	2,707	412.5	57.5	0.86	21.5	0.70	20	34
	Core 3	40	3,414	451.2	73.8	0.89	24.5	0.75	20	34

**Table 7.2.4 Spring 1999 Virginia SOL High School End-of-Course Assessments:
Scale Score Summary and Reliabilities**

<i>SOL Assessment</i>	<i>Form</i>	<i>No. of Items</i>	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>KR20</i>	<i>SEM</i>	<i>Prop. Max.</i>	<i>Conditional SEM</i>	
									<i>Prof. Cut</i>	<i>Adv. Cut</i>
English: Reading/Lit. & Res.	Core 1	42	52,794	443.7	60.6	0.87	21.8	0.71	18	26
	Core 2	42	2,067	422.2	56.7	0.88	19.6	0.64	18	29
Algebra I	Core 1	50	69,912	414.9	52.9	0.91	15.9	0.61	13	24
	Core 2	50	2,779	397.2	44.1	0.88	15.3	0.55	13	24
Geometry	Core 1	45	51,775	420.2	52.2	0.88	18.1	0.63	15	26
	Core 2	45	1,632	403.0	44.5	0.85	17.2	0.58	16	26
Algebra II	Core 1	50	42,839	407.0	56.7	0.88	19.6	0.62	17	27
	Core 2	50	1,365	366.2	49.2	0.87	17.7	0.55	18	33
United States History	Core 1	61	58,806	379.1	55.4	0.89	18.4	0.56	17	27
	Core 2	61	2,163	376.1	57.3	0.89	19.0	0.55	17	27
Wrld. Hist. to 1000 A.D./Wrld. Geog.	Core 1	61	42,937	419.9	45.3	0.90	14.3	0.63	13	22
	Core 2	61	1,547	409.9	40.9	0.89	13.6	0.57	12	20
Wrld. Hist. Fr. 1000 A.D./Wrld. Geog.	Core 1	63	31,518	402.9	50.7	0.92	14.3	0.56	13	21
	Core 2	63	1,165	388.4	40.8	0.88	14.1	0.50	13	21
Earth Science	Core 1	50	55,974	422.1	51.0	0.87	18.4	0.64	16	25
	Core 2	50	2,694	420.8	54.2	0.89	18.0	0.62	16	24
Biology	Core 1	50	64,878	434.7	43.7	0.87	15.8	0.67	13	21
	Core 2	50	2,249	425.0	43.4	0.88	15.0	0.62	13	21
Chemistry	Core 1	50	42,733	414.3	44.1	0.87	15.9	0.63	14	23
	Core 2	50	997	416.4	40.7	0.86	15.2	0.62	14	24

**Table 7.2.5 Spring 1999 Virginia SOL Grade 5 Writing Assessments:
Scale Score Summary and Reliabilities**

Writing Assessment Configuration		No. of	Max.	N	Mean	SD	Alpha	SEM	Prop.	Conditional SEM	
MC	Prompt	Items	Score							Max.	Prof. Cut
Core 1	Core 1	21	44	34,014	447.7	57.5	0.80	25.7	0.76	18	29
Core 1	Core 2	21	44	33,382	454.0	60.6	0.81	26.4	0.77	19	27
Core 2	Core 1	21	44	482	434.7	57.7	0.80	25.8	0.69	18	23
Core 2	Core 2	21	44	5,314	442.2	56.0	0.80	25.0	0.73	18	25
Core 3	Core 1	21	44	2,728	429.8	54.3	0.79	24.9	0.71	19	25
Core 3	Core 2	21	44	4,038	447.7	61.9	0.80	27.7	0.75	19	27

**Table 7.2.6 Spring 1999 Virginia SOL Grade 8 Writing Assessments:
Scale Score Summary and Reliabilities**

Writing Assessment Configuration		No. of	Max.	N	Mean	SD	Alpha	SEM	Prop.	Conditional SEM	
MC	Prompt	Items	Score							Max.	Prof. Cut
Core 1	Core 1	21	44	31,403	424.6	49.2	0.81	21.4	0.73	16	25
Core 1	Core 2	21	44	34,465	433.9	54.9	0.83	22.6	0.75	16	25
Core 1	Core 3	21	44	1,773	417.2	52.0	0.84	20.8	0.71	15	29
Core 2	Core 1	21	44	435	411.7	43.4	0.79	19.9	0.69	15	28
Core 2	Core 2	21	44	4,999	421.2	47.4	0.81	20.7	0.72	15	28
Core 2	Core 3	21	44	103	410.4	47.6	0.83	19.6	0.67	15	29
Core 3	Core 1	21	44	2,276	404.5	43.1	0.81	18.8	0.66	15	29
Core 3	Core 2	21	44	3,873	428.2	56.0	0.83	23.1	0.73	14	29
Core 3	Core 3	21	44	88	428.9	48.2	0.83	19.9	0.75	15	29

**Table 7.2.7 Spring 1999 Virginia SOL High School Writing Assessments:
Scale Score Summary and Reliabilities**

Writing Assessment Configuration		No. of	Max.	N	Mean	SD	Alpha	SEM	Prop.	Conditional SEM	
MC	Prompt	Items	Score							Max.	Prof. Cut
Core 1	Core 1	31	54	23,702	442.5	50.6	0.85	19.6	0.73	15	22
Core 1	Core 2	31	54	25,318	447.5	51.8	0.86	19.4	0.75	15	22
Core 2	Core 1	31	54	1,749	428.7	55.6	0.86	20.8	0.69	16	23
Core 2	Core 2	31	54	6,226	442.8	56.0	0.86	21.0	0.75	16	23

**Table 7.3.1 Spring 1999 Virginia SOL Grade 3 Assessments:
Correlations Among Assessments**

<i>Standards of Learning Assessment</i>	1	2	3	4
Core 1				
1. English: Reading/Writing	1.00	.77	.73	.74
2. Mathematics		1.00	.73	.75
3. History			1.00	.78
4. Science				1.00
Core 2				
1. English: Reading/Writing	1.00	.77	.76	.75
2. Mathematics		1.00	.73	.75
3. History			1.00	.79
4. Science				1.00

**Table 7.3.2 Spring 1999 Virginia SOL Grade 5 Assessments:
Correlations Among Assessments**

<i>Standards of Learning Assessment</i>	1	2	3	4	5
Core 1					
1. English: Reading/Lit. & Res.	1.00	.71	.72	.72	.72
2. Mathematics		1.00	.70	.71	.69
3. History			1.00	.73	.71
4. Science				1.00	.71
5. Computer/Technology					1.00
Core 2					
1. English: Reading/ Lit. & Res.	1.00	.67	.67	.68	.66
2. Mathematics		1.00	.68	.68	.64
3. History			1.00	.73	.66
4. Science				1.00	.69
5. Computer/Technology					1.00

**Table 7.3.3 Spring 1999 Virginia SOL Grade 8 Assessments:
Correlations Among Assessments**

<i>Standards of Learning Assessment</i>	1	2	3	4	5
Core 1					
1. English: Reading/Lit. & Res.	1.00	.70	.72	.74	.72
2. Mathematics		1.00	.69	.74	.70
3. History			1.00	.74	.70
4. Science				1.00	.73
5. Computer/Technology					1.00
Core 2					
1. English: Reading/Lit. & Res.	1.00	.69	.71	.70	.68
2. Mathematics		1.00	.66	.71	.64
3. History			1.00	.74	.67
4. Science				1.00	.65
5. Computer/Technology					1.00
Core 3					
1. English: Reading/Lit. & Res.	1.00	.75	.75	.74	.75
2. Mathematics		1.00	.75	.79	.73
3. History			1.00	.77	.73
4. Science				1.00	.73
5. Computer/Technology					1.00

**Table 7.4.1 Spring 1999 Virginia SOL Assessments:
Grade 3 Decision Consistency and Accuracy Indices**

<i>Standards of Learning Assessment</i>	<i>Form</i>	<i>Accuracy</i>	<i>False Positives</i>	<i>False Negatives</i>	<i>Consistency</i>
English: Reading & Writing	Core 1	.91	.06	.04	.87
	Core 2	.91	.06	.04	.87
Mathematics	Core 1	.91	.05	.04	.88
	Core 2	.91	.05	.04	.87
History/Social Science	Core 1	.89	.06	.05	.85
	Core 2	.89	.06	.04	.85
Science	Core 1	.89	.06	.05	.85
	Core 2	.90	.05	.04	.86

**Table 7.4.2 Spring 1999 Virginia SOL Assessments:
Grade 5 Decision Consistency and Accuracy Indices**

<i>Standards of Learning Assessment</i>	<i>Form</i>	<i>Accuracy</i>	<i>False Positives</i>	<i>False Negatives</i>	<i>Consistency</i>
English: Reading & Writing	Core 1	.92	.05	.04	.89
	Core 2	.94	.04	.03	.91
Mathematics	Core 1	.90	.06	.04	.87
	Core 2	.89	.07	.04	.84
History/Social Science	Core 1	.88	.07	.04	.84
	Core 2	.89	.07	.04	.85
Science	Core 1	.88	.07	.05	.84
	Core 2	.87	.08	.06	.82
Computer/Technology	Core 1	.91	.05	.04	.88
	Core 2	.91	.05	.04	.88

**Table 7.4.3 Spring 1999 Virginia SOL Assessments:
Grade 8 Decision Consistency and Accuracy Indices**

<i>Standards of Learning Assessment</i>	<i>Form</i>	<i>Accuracy</i>	<i>False Positives</i>	<i>False Negatives</i>	<i>Consistency</i>
English: Reading & Writing	Core 1	.91	.05	.04	.88
	Core 2	.91	.05	.04	.88
	Core 3	.91	.05	.04	.88
Mathematics	Core 1	.92	.05	.04	.88
	Core 2	.91	.05	.03	.88
	Core 3	.92	.05	.03	.89
History/Social Science	Core 1	.88	.08	.04	.84
	Core 2	*	*	*	*
	Core 3	.89	.07	.04	.85
Science	Core 1	.92	.04	.04	.89
	Core 2	.91	.05	.04	.87
	Core 3	.92	.04	.04	.89
Computer/Technology	Core 1	.90	.05	.05	.86
	Core 2	.89	.06	.05	.85
	Core 3	.92	.04	.04	.89

* Indices not computed due to size of sample

**Table 7.4.4 Spring 1999 Virginia SOL Assessments:
High School End-of-Course Decision Consistency and Accuracy Indices**

<i>Standards of Learning Assessment</i>	Form	Accuracy	False Positives	False Negatives	Consistency
English: Reading/Lit. & Res.	Core 1	.92	.04	.04	.89
	Core 2	.91	.05	.04	.87
Algebra I	Core 1	.91	.05	.04	.88
	Core 2	.90	.07	.04	.86
Geometry	Core 1	.89	.06	.05	.85
	Core 2	.87	.08	.05	.83
Algebra II	Core 1	.89	.06	.04	.85
	Core 2	.92	.05	.03	.89
United States History	Core 1	.91	.06	.03	.87
	Core 2	.91	.06	.03	.88
World History to 1000 A.D./World Geog.	Core 1	.92	.05	.04	.88
	Core 2	.90	.06	.04	.86
World History From 1000 A.D./World Geog.	Core 1	.92	.05	.03	.89
	Core 2	.90	.06	.04	.86
Earth Science	Core 1	.90	.06	.05	.86
	Core 2	.90	.06	.04	.86
Biology	Core 1	.93	.04	.04	.90
	Core 2	.91	.05	.04	.87
Chemistry	Core 1	.89	.06	.05	.85
	Core 2	.88	.06	.05	.84

**Table 7.4.5 Spring 1999 Virginia SOL Assessments:
Grade 5 Decision Consistency and Accuracy Indices**

Writing Assessment Configuration					
MC	Prompt	Accuracy	False Positives	False Negatives	Consistency
Core 1	Core 1	.89	.04	.07	.85
Core 1	Core 2	.91	.03	.06	.88
Core 2	Core 1	.91	.03	.07	.86
Core 2	Core 2	.89	.04	.07	.84
Core 3	Core 1	.88	.07	.06	.83
Core 3	Core 1	.90	.04	.06	.85

**Table 7.4.6 Spring 1999 Virginia SOL Assessments:
Grade 8 Decision Consistency and Accuracy Indices**

Writing Assessment Configuration					
MC	Prompt	Accuracy	False Positives	False Negatives	Consistency
Core 1	Core 1	.88	.07	.05	.84
Core 1	Core 2	.89	.05	.06	.84
Core 1	Core 3	.89	.05	.06	.85
Core 2	Core 1	.87	.05	.09	.81
Core 2	Core 2	.88	.06	.06	.84
Core 2	Core 3	.87	.07	.06	.82
Core 3	Core 1	.87	.07	.06	.82
Core 3	Core 1	.89	.06	.06	.84
Core 3	Core 3	.90	.04	.06	.86

**Table 7.4.7 Spring 1999 Virginia SOL Assessments:
High School End-of-Course Decision Consistency and Accuracy Indices**

Writing Assessment Configuration					
MC	Prompt	Accuracy	False Positives	False Negatives	Consistency
Core 1	Core 1	.92	.04	.04	.89
Core 1	Core 2	.93	.03	.04	.90
Core 2	Core 1	.89	.05	.06	.85
Core 2	Core 2	.92	.04	.04	.84

Table 7.5.1 Spring 1999 Virginia SOL End-of-Course Writing Assessment: Inter-Rater Reliability

Prompt/ Writing Domain Score	N	Percent		
		Perfect Agreement	Adjacent	Non-Adjacent
Core 1				
Composing	28,418	74.5	25.3	0.2
Written Expression	28,418	73.2	26.6	0.3
Usage and Mechanics	28,418	70.7	28.8	0.5
Core 2				
Composing	32,776	69.9	29.9	0.2
Written Expression	32,776	68.2	31.6	0.3
Usage and Mechanics	32,776	65.4	34.1	0.6

**Table 7.6.1 Spring 1999 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:
Grade 3 Mathematics**

Raw Score	Core 1		Core 2	
	Scale Score	Standard Error	Scale Score	Standard Error
0	0	76	0	76
1	34	76	34	76
2	87	54	89	54
3	120	46	121	46
4	144	40	145	40
5	164	36	165	36
6	180	34	180	34
7	194	31	195	31
8	206	30	207	30
9	218	28	219	28
10	229	28	230	28
11	238	27	239	27
12	248	26	248	26
13	257	25	257	25
14	265	25	265	25
15	273	25	274	25
16	281	24	281	24
17	289	24	289	24
18	296	23	296	23
19	303	23	304	23
20	311	23	311	23
21	317	23	318	23
22	325	23	324	22
23	331	22	331	22
24	338	22	339	22
25	345	22	345	22
26	352	22	352	22
27	359	22	359	22
28	366	23	365	22
29	373	23	373	23
30	380	23	380	23
31	387	23	387	23
32	394	24	394	24
33	402	24	401	24
34	410	24	409	24
35	417	25	417	25
36	426	25	425	25
37	434	25	434	25
38	443	26	443	26
39	452	27	453	27
40	463	28	462	28
41	473	29	474	29
42	485	30	485	31
43	498	32	498	32
44	512	34	512	34
45	529	37	530	37
46	548	40	549	40
47	573	46	574	46
48	582	55	583	55
49	591	76	592	76
50	600	76	600	76

**Table 7.6.2 Spring 1999 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:
Grade 3 History/Social Science**

Raw Score	Core 1		Core 2	
	Scale Score	Standard Error	Scale Score	Standard Error
0	0	53	0	53
1	168	53	159	53
2	207	38	198	39
3	230	32	222	32
4	247	28	239	29
5	261	26	253	26
6	273	24	265	24
7	283	23	276	23
8	292	21	285	22
9	300	20	294	21
10	308	20	302	20
11	315	19	310	20
12	322	19	317	19
13	329	18	324	19
14	335	18	330	18
15	341	18	337	18
16	347	18	343	18
17	353	18	349	18
18	359	17	355	18
19	365	17	361	18
20	371	17	367	18
21	377	17	373	18
22	383	17	379	18
23	388	17	385	18
24	394	18	391	18
25	400	18	397	18
26	406	18	404	18
27	412	18	410	19
28	419	19	417	19
29	426	19	424	19
30	433	20	431	20
31	441	20	439	20
32	449	21	448	21
33	458	23	457	23
34	468	24	467	24
35	480	26	479	26
36	494	28	493	28
37	510	32	510	32
38	533	38	533	39
39	572	53	571	53
40	600	53	600	53

**Table 7.6.3 Spring 1999 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:
Grade 3 Science**

Raw Score	Core 1		Core 2	
	Scale Score	Standard Error	Scale Score	Standard Error
0	0	61	0	61
1	109	61	104	61
2	154	44	149	44
3	181	37	176	37
4	201	33	196	33
5	218	30	213	30
6	231	28	227	28
7	243	26	239	26
8	255	25	251	25
9	265	25	261	25
10	274	23	270	24
11	283	23	280	23
12	292	22	288	23
13	300	22	297	22
14	308	22	304	22
15	316	22	312	22
16	323	21	320	22
17	331	21	328	21
18	338	21	335	21
19	345	21	342	21
20	352	21	349	21
21	360	21	357	21
22	367	21	364	21
23	374	21	371	21
24	382	21	379	21
25	389	22	386	22
26	397	22	394	22
27	404	22	402	22
28	413	22	410	22
29	421	23	418	23
30	430	23	427	23
31	440	25	437	24
32	450	25	447	25
33	461	26	458	26
34	473	28	470	28
35	487	30	483	30
36	503	33	500	32
37	524	37	519	37
38	551	44	547	44
39	595	61	591	61
40	600	61	600	61

**Table 7.6.4 Spring 1999 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:
Grade 3 English: Reading and Writing**

Raw Score	Core 1		Core 2	
	Scale Score	Standard Error	Scale Score	Standard Error
0	0	56	0	56
1	130	56	128	56
2	170	40	168	40
3	194	33	192	34
4	211	29	211	30
5	226	26	225	27
6	237	25	237	25
7	248	23	247	24
8	257	22	257	22
9	265	21	265	21
10	273	20	273	20
11	280	20	281	20
12	287	19	288	19
13	294	19	295	19
14	300	18	301	19
15	306	18	307	18
16	311	18	313	18
17	317	18	319	18
18	323	18	325	18
19	328	17	330	18
20	333	17	336	18
21	339	17	341	18
22	344	17	347	18
23	349	17	353	18
24	355	17	358	18
25	360	17	364	18
26	366	17	369	18
27	371	18	375	18
28	377	18	381	18
29	382	18	387	18
30	388	18	393	18
31	394	18	399	19
32	400	19	406	19
33	407	19	412	20
34	414	20	419	20
35	421	20	427	21
36	429	21	435	21
37	437	22	444	23
38	446	23	453	24
39	457	25	464	25
40	469	26	476	27
41	483	29	490	30
42	501	34	508	34
43	525	40	533	41
44	565	56	573	56
45	600	56	600	56

**Table 7.6.5 Spring 1999 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:
Grade 5 English: Reading/Literature and Research**

Raw Score	Core 1		Core 2	
	Scale Score	Standard Error	Scale Score	Standard Error
0	0	51	0	51
1	156	51	161	51
2	193	37	197	37
3	215	31	219	31
4	232	27	236	27
5	245	25	249	25
6	256	23	260	23
7	266	22	270	22
8	275	21	279	21
9	284	20	287	20
10	291	19	294	19
11	298	19	301	19
12	305	19	307	18
13	312	18	314	18
14	318	18	320	17
15	324	18	325	17
16	330	17	331	17
17	336	17	336	17
18	341	17	342	17
19	347	17	347	17
20	352	17	352	17
21	358	17	358	16
22	364	17	363	17
23	369	17	368	17
24	375	17	374	17
25	380	17	379	17
26	386	17	385	17
27	392	18	390	17
28	398	18	396	17
29	404	18	402	18
30	411	18	408	18
31	417	19	415	19
32	424	19	422	19
33	432	20	429	20
34	440	21	437	21
35	449	22	446	22
36	459	23	455	23
37	470	25	467	25
38	483	27	480	27
39	500	31	496	31
40	522	37	518	37
41	559	51	555	51
42	600	51	600	51

**Table 7.6.6 Spring 1999 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:
Grade 5 Mathematics**

Raw Score	Core 1		Core 2	
	Scale Score	Standard Error	Scale Score	Standard Error
0	0	54	0	54
1	141	54	138	54
2	179	38	176	38
3	203	32	199	32
4	219	28	217	28
5	233	25	230	26
6	244	24	242	24
7	254	22	252	23
8	263	21	261	21
9	271	20	269	21
10	278	19	277	19
11	285	19	284	19
12	292	18	290	18
13	298	18	297	18
14	304	17	303	18
15	310	17	309	17
16	315	17	315	17
17	320	17	320	17
18	326	16	326	17
19	331	16	331	17
20	336	16	336	16
21	341	16	341	16
22	346	16	346	16
23	350	16	351	16
24	355	16	356	16
25	360	16	361	16
26	365	16	366	16
27	369	16	371	16
28	374	16	376	16
29	379	16	381	16
30	384	16	386	16
31	389	16	391	17
32	394	16	397	17
33	399	17	402	17
34	405	17	408	17
35	410	17	413	17
36	416	17	419	18
37	422	18	426	18
38	428	18	432	18
39	435	19	439	19
40	442	19	446	20
41	449	20	454	21
42	457	21	462	22
43	466	22	471	23
44	476	24	481	24
45	487	25	493	26
46	500	28	507	28
47	517	32	524	32
48	540	38	548	39
49	579	54	586	54
50	600	54	600	54

**Table 7.6.7 Spring 1999 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:
Grade 5 History/Social Science**

Raw Score	Core 1		Core 2	
	Scale Score	Standard Error	Scale Score	Standard Error
0	0	51	0	51
1	164	51	164	51
2	201	37	201	37
3	224	31	223	31
4	241	27	240	27
5	254	25	253	25
6	265	23	264	23
7	275	22	274	22
8	285	21	283	21
9	293	20	291	20
10	301	19	298	19
11	308	19	306	19
12	314	18	313	18
13	321	18	319	18
14	327	18	325	18
15	333	17	331	17
16	339	17	337	17
17	345	17	343	17
18	350	17	348	17
19	356	17	354	17
20	361	17	359	17
21	367	17	365	17
22	372	17	370	17
23	378	17	376	17
24	384	17	382	17
25	390	17	388	17
26	396	18	393	18
27	402	18	400	18
28	408	18	406	18
29	415	19	413	19
30	422	19	420	19
31	429	20	428	20
32	437	21	436	21
33	446	22	444	22
34	456	23	454	23
35	467	25	465	25
36	480	27	478	27
37	497	31	495	31
38	519	37	518	37
39	555	51	554	51
40	600	51	600	51

**Table 7.6.8 Spring 1999 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:
Grade 5 Science**

Raw Score	Core 1		Core 2	
	Scale Score	Standard Error	Scale Score	Standard Error
0	0	50	0	50
1	170	50	166	50
2	206	36	203	36
3	228	30	225	30
4	244	26	241	27
5	257	24	254	24
6	269	22	266	23
7	278	21	276	21
8	287	20	285	20
9	295	20	293	20
10	302	19	300	19
11	309	18	308	19
12	316	18	314	18
13	322	18	321	18
14	328	17	327	18
15	334	17	333	17
16	340	17	339	17
17	345	17	345	17
18	350	17	351	17
19	356	16	356	17
20	362	16	362	17
21	367	16	368	17
22	372	16	373	17
23	378	17	379	17
24	384	17	385	17
25	389	17	390	17
26	395	17	396	17
27	401	17	402	18
28	407	18	409	18
29	413	18	415	18
30	420	19	422	19
31	428	19	430	20
32	436	20	438	20
33	444	21	447	21
34	454	22	456	22
35	465	24	468	24
36	477	26	480	26
37	493	30	496	30
38	515	36	518	36
39	551	50	554	50
40	600	50	600	50

**Table 7.6.9 Spring 1999 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:
Grade 5 Computer/Technology**

Raw Score	Core 1		Core 2	
	Scale Score	Standard Error	Scale Score	Standard Error
0	0	48	0	48
1	218	48	222	48
2	253	35	257	35
3	275	29	279	29
4	291	26	295	26
5	305	24	309	24
6	316	22	320	22
7	326	21	330	21
8	335	21	340	21
9	344	20	348	20
10	352	19	356	19
11	360	19	364	19
12	368	19	372	19
13	375	18	379	18
14	382	18	386	18
15	389	18	393	18
16	397	18	400	18
17	404	18	408	18
18	411	19	415	19
19	418	19	422	19
20	426	19	430	19
21	434	20	438	20
22	442	20	447	20
23	451	21	455	21
24	461	22	466	22
25	472	24	477	24
26	485	26	490	26
27	501	29	506	29
28	523	35	527	35
29	558	48	562	48
30	600	48	600	48

**Table 7.6.10 Spring 1999 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:
Grade 5 Writing**

RS	Core 1/ Core 1		Core 1/ Core 2		Core 2/ Core 1		Core 2/ Core 2		Core 3/ Core 1		Core 3/ Core 2	
	SS	SE										
0	0	48	0	47	0	48	0	48	0	48	0	48
1	29	48	28	47	30	48	28	48	29	48	29	48
2	56	48	54	47	58	48	56	48	55	48	55	48
3	83	48	80	47	86	48	84	48	81	48	81	48
4	110	48	106	47	114	48	112	48	107	48	107	48
5	137	48	132	47	142	48	140	48	133	48	133	48
6	164	48	158	47	170	48	168	48	159	48	159	48
7	191	48	184	47	198	48	196	48	185	48	185	48
8	226	35	217	34	233	35	230	34	219	35	219	34
9	247	29	238	28	255	29	251	29	240	29	240	29
10	262	25	253	25	271	26	266	25	256	25	255	25
11	275	23	265	23	285	24	278	23	269	23	268	23
12	285	22	275	22	296	22	289	22	279	22	278	22
13	295	20	285	20	306	21	298	20	289	21	288	20
14	303	19	293	20	315	20	306	20	298	20	296	20
15	311	19	301	19	323	20	314	19	306	19	304	19
16	318	18	308	19	331	19	322	19	313	19	312	19
17	325	18	316	18	338	19	329	18	321	18	319	18
18	332	17	323	18	346	18	336	18	328	18	326	18
19	338	17	331	18	353	18	343	18	335	18	333	18
20	345	17	338	18	360	18	350	18	341	18	340	18
21	351	17	345	18	367	18	357	18	348	18	347	18
22	357	17	352	18	374	18	363	18	355	18	354	18
23	364	17	359	18	381	18	370	18	362	18	361	18
24	370	17	366	18	387	18	377	18	369	18	368	18
25	377	18	374	18	394	18	385	18	376	18	375	18
26	384	18	381	18	401	18	392	18	384	19	382	18
27	390	18	388	19	408	18	399	18	391	19	390	19
28	397	18	396	19	415	18	406	18	399	19	397	19
29	404	18	403	19	422	18	413	18	406	19	405	19
30	412	19	410	19	429	18	420	19	414	19	412	19
31	419	19	418	19	436	18	428	19	422	20	420	19
32	427	19	426	19	443	18	435	19	431	20	429	20
33	435	20	434	20	450	19	443	19	439	20	437	20
34	443	20	443	21	458	19	451	20	448	21	446	21
35	452	21	453	21	465	19	460	21	457	21	455	22
36	462	22	462	23	474	20	469	21	467	22	466	23
37	472	23	474	23	482	21	479	22	478	23	477	23
38	483	24	486	25	492	22	490	23	490	24	489	25
39	497	26	501	27	502	23	502	25	503	25	503	27
40	512	29	517	29	514	25	517	27	518	28	520	29
41	532	32	536	31	529	28	534	30	536	31	539	32
42	558	38	560	36	549	34	557	36	559	36	564	37
43	599	51	595	48	582	47	593	48	597	49	589	50
44	600	51	600	48	600	47	600	48	600	49	600	50

**Table 7.6.11 Spring 1999 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:
Grade 8 English: Reading/Literature and Research**

Raw Score	Core 1		Core 2		Core 3	
	Scale Score	Standard Error	Scale Score	Standard Score	Scale Error	Standard Error
0	0	65	0	65	0	65
1	102	65	88	65	107	65
2	148	47	134	47	155	47
3	177	39	163	39	184	39
4	198	35	184	35	205	35
5	214	31	200	31	221	31
6	228	29	215	29	236	29
7	241	28	227	28	249	28
8	252	26	238	26	260	26
9	262	25	248	25	271	26
10	272	24	258	24	280	24
11	280	24	267	24	289	24
12	289	23	275	23	298	23
13	297	22	284	22	306	23
14	304	22	291	22	314	22
15	312	22	299	22	322	22
16	319	21	306	22	329	22
17	326	21	313	21	337	22
18	333	21	320	21	344	21
19	340	21	327	21	351	21
20	346	21	334	21	358	21
21	353	21	341	21	365	21
22	360	21	348	21	372	21
23	367	21	356	21	379	21
24	374	21	363	21	386	21
25	381	21	370	22	393	22
26	388	22	377	22	400	22
27	395	22	384	22	408	22
28	403	22	391	22	415	22
29	411	22	400	22	423	22
30	419	23	408	23	431	23
31	427	24	416	24	439	24
32	436	24	425	24	448	24
33	446	26	435	26	458	25
34	456	26	446	26	468	26
35	468	28	457	28	480	28
36	480	29	470	29	492	29
37	495	32	484	32	507	31
38	512	35	502	35	523	35
39	534	40	523	40	545	39
40	562	47	552	47	573	47
41	581	65	599	65	587	65
42	600	65	600	65	600	65

**Table 7.6.12 Spring 1999 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:
Grade 8 Mathematics**

Raw Score	Core 1		Core 2		Core 3	
	Scale Score	Standard Error	Scale Score	Standard Error	Scale Score	Standard Error
0	0	49	0	49	0	50
1	160	49	163	49	158	50
2	195	35	198	35	194	36
3	216	29	219	29	216	30
4	232	26	234	26	232	26
5	244	23	247	23	244	24
6	254	21	257	21	255	22
7	263	20	266	20	264	20
8	271	19	274	19	272	19
9	278	18	281	18	279	18
10	284	17	287	17	286	18
11	291	17	294	17	292	17
12	296	17	299	17	298	17
13	301	16	304	16	304	16
14	307	16	310	16	309	16
15	312	15	315	15	314	16
16	316	15	319	15	319	15
17	321	15	323	15	323	15
18	325	15	328	15	328	15
19	329	14	332	14	332	15
20	333	14	336	14	337	14
21	337	14	340	14	340	14
22	341	14	344	14	345	14
23	345	14	348	14	349	14
24	349	14	351	14	353	14
25	353	14	355	14	357	14
26	357	14	359	14	360	14
27	360	14	363	13	364	14
28	364	13	367	13	368	14
29	367	13	370	13	372	14
30	371	13	374	13	375	14
31	375	13	377	13	379	14
32	379	13	381	13	383	14
33	382	14	384	13	387	14
34	386	14	388	14	390	14
35	390	14	392	14	394	14
36	393	14	396	14	398	14
37	397	14	400	14	402	14
38	401	14	403	14	406	14
39	405	14	407	14	410	14
40	409	14	411	14	414	14
41	413	14	415	14	419	15
42	417	15	419	15	423	15
43	421	15	423	15	427	15
44	426	15	428	15	432	15
45	431	15	433	15	437	16
46	435	16	437	16	442	16
47	440	16	442	16	447	16
48	446	17	448	16	453	17
49	451	17	453	17	458	17
50	457	17	459	17	465	18
51	464	18	466	18	472	18
52	470	19	472	19	479	19
53	478	20	480	20	487	20
54	487	21	489	21	496	22
55	497	23	499	23	507	23
56	509	26	511	25	519	26
57	524	29	526	29	535	30
58	546	35	547	35	556	35
59	580	49	582	49	591	50
60	600	49	600	49	600	50

**Table 7.6.13 Spring 1999 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:
Grade 8 History/Social Science**

Raw Score	Core 1		Core 2		Core 3	
	Scale Score	Standard Error	Scale Score	Standard Error	Scale Error	Standard Error
0	0	60	0	60	0	60
1	97	60	111	60	99	60
2	141	44	154	43	142	43
3	168	37	180	36	169	36
4	188	32	198	31	188	32
5	204	29	213	28	204	29
6	218	27	226	26	217	27
7	230	26	237	25	228	25
8	241	25	247	23	239	24
9	250	23	256	22	248	23
10	260	22	264	22	257	22
11	268	22	271	21	265	22
12	276	21	279	20	273	21
13	283	20	286	20	280	20
14	290	20	293	19	287	20
15	297	20	299	19	294	20
16	304	19	305	19	300	19
17	310	19	311	19	306	19
18	316	19	317	19	312	19
19	322	19	323	18	318	19
20	328	19	328	18	324	19
21	334	18	334	18	330	18
22	340	18	339	18	336	18
23	345	18	345	18	342	18
24	351	18	350	18	347	18
25	357	18	356	18	353	18
26	362	18	361	18	359	18
27	368	18	366	18	365	18
28	373	18	372	18	370	18
29	379	18	377	18	376	19
30	384	18	383	18	381	19
31	390	19	388	18	387	19
32	396	19	394	19	394	19
33	402	19	400	19	400	19
34	408	19	406	19	406	19
35	414	19	412	19	412	20
36	421	20	419	19	419	20
37	428	20	425	20	426	20
38	435	20	432	20	434	21
39	442	21	440	21	442	22
40	450	22	447	22	450	22
41	458	23	456	22	459	23
42	467	23	465	23	469	24
43	477	25	474	25	479	26
44	488	26	485	26	491	27
45	501	28	498	28	504	29
46	516	31	514	31	520	32
47	535	36	532	36	539	36
48	560	43	558	43	566	43
49	580	60	579	60	583	60
50	600	60	600	60	600	60

**Table 7.6.14 Spring 1999 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:
Grade 8 Science**

Raw Score	Core 1		Core 2		Core 3	
	Scale Score	Standard Error	Scale Score	Standard Error	Scale Error	Standard Error
0	0	50	0	50	0	50
1	187	50	186	50	170	50
2	223	36	222	36	206	36
3	244	30	243	30	229	30
4	260	26	259	26	245	27
5	273	24	271	24	258	25
6	284	22	282	22	269	23
7	293	21	292	21	279	21
8	301	20	300	20	288	20
9	309	19	307	19	296	19
10	316	18	314	18	303	19
11	322	18	320	18	310	18
12	329	17	327	17	316	18
13	335	17	333	17	323	17
14	340	17	338	16	329	17
15	345	16	343	16	334	16
16	351	16	348	16	339	16
17	356	16	353	16	345	16
18	360	15	358	15	350	16
19	365	15	363	15	355	16
20	370	15	367	15	359	15
21	375	15	372	15	364	15
22	379	15	377	15	369	15
23	384	15	381	15	374	15
24	388	15	386	15	378	15
25	393	15	390	15	383	15
26	397	15	394	15	387	15
27	402	15	399	15	392	15
28	406	15	403	15	397	15
29	411	15	408	15	401	15
30	415	15	413	15	406	15
31	420	15	417	15	410	15
32	425	15	422	15	415	16
33	430	16	427	16	420	16
34	435	16	432	16	425	16
35	440	16	437	16	430	16
36	445	16	442	16	436	16
37	451	17	447	17	441	17
38	456	17	453	17	447	17
39	462	18	460	18	454	18
40	469	18	466	18	460	18
41	476	19	473	19	467	19
42	483	20	480	20	474	20
43	491	21	489	21	482	21
44	501	22	498	22	492	22
45	511	24	509	24	503	24
46	524	26	521	26	515	26
47	539	29	537	30	531	30
48	560	36	558	36	552	36
49	596	50	594	50	588	50
50	600	50	600	50	600	50

**Table 7.6.15 Spring 1999 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:
Grade 8 Computer/Technology**

Raw Score	Core 1		Core 2		Core 3	
	Scale Score	Standard Error	Scale Score	Standard Score	Scale Error	Standard Error
0	0	57	0	57	0	57
1	134	57	128	57	134	57
2	176	41	169	41	175	41
3	201	34	195	35	200	34
4	220	30	214	30	218	30
5	234	27	229	28	234	27
6	248	26	242	26	247	26
7	259	24	253	25	258	25
8	269	23	264	23	268	24
9	279	23	274	23	278	23
10	288	22	282	22	287	22
11	296	21	291	21	296	21
12	304	21	298	21	304	21
13	312	20	306	20	312	20
14	319	20	313	20	320	20
15	326	20	320	20	327	20
16	333	20	327	19	334	20
17	340	19	334	19	341	20
18	347	19	341	19	348	20
19	354	19	347	19	355	20
20	360	19	354	19	362	20
21	367	19	360	19	369	20
22	374	19	367	19	376	20
23	380	19	374	19	383	20
24	387	19	380	19	390	20
25	394	20	387	19	397	20
26	401	20	394	20	405	20
27	409	20	401	20	412	20
28	416	20	408	20	420	21
29	424	21	416	21	428	21
30	432	21	424	21	437	22
31	441	22	432	22	445	23
32	450	23	442	23	455	24
33	460	24	452	24	466	25
34	471	25	463	25	477	26
35	484	27	475	27	490	27
36	499	30	490	30	505	30
37	517	34	508	34	524	34
38	541	41	533	41	549	41
39	582	56	574	56	590	56
40	600	56	600	56	600	56

**Table 7.6.16 Spring 1999 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:
Grade 8 Writing**

RS	Core 1/ Core 1		Core 1/ Core 2		Core 2/ Core 3	
	SS	SE	SS	SE	SS	SE
0	0	40	0	40	0	40
1	32	40	30	40	30	40
2	62	40	61	40	61	40
3	92	40	92	40	92	40
4	122	40	123	40	123	40
5	152	40	154	40	154	40
6	182	40	185	40	185	40
7	212	40	216	40	216	40
8	240	28	245	29	245	29
9	258	24	262	24	263	24
10	270	21	275	21	276	21
11	281	19	285	19	286	19
12	289	18	294	18	296	18
13	298	17	302	17	304	18
14	305	17	309	16	311	17
15	312	16	315	16	319	16
16	319	16	321	16	325	16
17	325	16	328	16	332	16
18	332	16	334	15	338	16
19	338	16	340	15	344	15
20	344	16	346	15	350	15
21	350	16	351	15	356	15
22	356	16	358	15	362	15
23	363	16	363	15	367	15
24	369	16	369	15	373	15
25	375	16	375	15	379	15
26	381	16	381	15	384	15
27	387	16	387	15	389	15
28	393	16	393	16	395	15
29	400	16	399	16	401	15
30	406	16	405	16	406	15
31	412	16	412	16	412	15
32	419	16	419	16	418	15
33	426	16	426	17	424	15
34	433	17	433	18	430	16
35	440	17	441	18	436	16
36	448	18	450	19	443	17
37	456	18	460	19	450	17
38	465	19	470	20	458	18
39	475	20	481	21	468	19
40	487	22	493	23	478	21
41	500	25	507	25	491	24
42	519	29	526	29	509	29
43	548	40	553	39	537	40
44	600	40	600	39	600	40

**Table 7.6.16 (continued) Spring 1999 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:
Grade 8 Writing**

RS	Core 2/ Core 1		Core 2/ Core 2		Core 2/ Core 3	
	SS	SE	SS	SE	SS	SE
0	0	40	0	40	0	40
1	31	40	29	40	34	40
2	61	40	60	40	65	40
3	93	40	91	40	96	40
4	124	40	122	40	127	40
5	155	40	153	40	158	40
6	186	40	184	40	189	40
7	217	40	215	40	220	40
8	246	29	244	29	249	29
9	264	24	261	24	267	24
10	277	21	274	21	280	21
11	288	19	284	19	290	19
12	297	18	293	18	299	18
13	305	17	302	17	307	17
14	312	16	309	17	314	16
15	319	16	316	16	320	16
16	325	16	323	16	326	15
17	332	16	329	16	332	15
18	337	15	335	16	338	15
19	344	15	341	16	344	15
20	349	15	347	15	349	15
21	355	15	353	15	355	15
22	361	15	359	15	360	15
23	366	15	365	15	366	15
24	372	15	371	15	371	15
25	377	15	376	15	377	15
26	383	15	382	15	382	15
27	389	15	388	15	388	15
28	394	15	393	15	393	15
29	400	15	399	15	399	15
30	406	15	405	15	405	15
31	412	15	411	15	411	16
32	418	15	417	16	417	16
33	424	16	423	16	423	16
34	430	16	430	16	430	16
35	437	16	437	17	437	17
36	444	17	444	17	445	18
37	451	18	453	18	454	19
38	460	19	461	19	463	19
39	469	20	471	20	473	21
40	480	21	482	21	485	22
41	493	24	495	24	499	25
42	511	28	512	28	517	29
43	539	39	540	39	546	40
44	600	39	600	39	600	40

**Table 7.6.16 (continued) Spring 1999 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:
Grade 8 Writing**

RS	Core 3/ Core 1		Core 3/ Core 2		Core 3/ Core 3	
	SS	SE	SS	SE	SS	SE
0	0	40	0	41	0	40
1	30	40	29	41	30	40
2	61	40	61	41	61	40
3	92	40	93	41	92	40
4	123	40	125	41	123	40
5	154	40	157	41	154	40
6	185	40	189	41	185	40
7	216	40	221	41	216	40
8	244	29	252	30	245	29
9	262	24	270	25	263	24
10	274	21	284	22	276	21
11	285	19	295	20	286	19
12	293	18	305	18	296	18
13	301	17	313	17	304	18
14	309	16	320	16	311	17
15	315	16	327	16	319	16
16	322	16	333	16	325	16
17	328	16	339	15	332	16
18	334	16	345	15	338	16
19	340	16	350	15	344	15
20	347	15	356	14	350	15
21	353	15	361	14	356	15
22	359	15	367	14	362	15
23	365	15	372	14	367	15
24	370	15	377	14	373	15
25	376	15	382	14	379	15
26	382	15	388	14	384	15
27	388	15	393	14	389	15
28	394	15	398	14	395	15
29	399	15	404	14	401	15
30	405	15	409	14	406	15
31	411	15	414	15	412	15
32	417	16	420	15	418	15
33	423	16	426	15	424	15
34	430	16	432	16	430	16
35	437	17	438	16	436	16
36	444	17	445	17	443	17
37	452	18	452	18	450	17
38	461	19	460	18	458	18
39	471	20	470	19	468	19
40	482	22	481	21	478	21
41	496	25	494	24	491	24
42	514	29	512	29	509	29
43	544	40	541	40	537	40
44	600	40	600	40	600	40

**Table 7.6.17 Spring 1999 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:
High School End-of-Course English: Reading/Literature and Research**

Raw Score	Core 1		Core 2	
	Scale Score	Standard Error	Scale Score	Standard Error
0	0	56	0	56
1	147	56	154	56
2	190	41	195	41
3	216	35	220	34
4	236	30	239	30
5	252	28	254	27
6	266	26	267	26
7	277	25	279	24
8	288	23	289	23
9	298	22	299	22
10	306	21	307	21
11	315	21	315	20
12	322	20	323	20
13	330	20	330	19
14	337	19	337	19
15	344	19	344	19
16	350	19	350	19
17	356	18	357	18
18	363	18	363	18
19	369	18	369	18
20	375	18	375	18
21	381	18	381	18
22	387	18	387	18
23	393	18	393	18
24	399	18	399	18
25	405	18	405	18
26	412	18	411	18
27	418	19	417	18
28	424	19	423	19
29	431	19	430	19
30	438	19	437	19
31	445	20	444	20
32	453	20	451	20
33	461	21	459	21
34	469	22	468	22
35	479	23	477	23
36	490	25	488	25
37	501	26	499	26
38	515	29	513	29
39	533	33	531	33
40	557	39	554	39
41	596	55	593	55
42	600	55	600	55

**Table 7.6.18 Spring 1999 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:
High School End-of-Course Algebra I**

Raw Score	Core 1		Core 2	
	Scale Score	Standard Error	Scale Score	Standard Error
0	0	45	0	45
1	206	45	203	45
2	239	32	236	32
3	258	27	255	27
4	272	24	270	24
5	283	21	281	21
6	293	20	291	20
7	301	19	299	19
8	308	18	306	18
9	315	17	313	17
10	321	16	319	16
11	327	16	325	16
12	332	15	330	15
13	337	15	335	15
14	342	15	340	15
15	346	14	345	14
16	351	14	350	14
17	355	14	354	14
18	360	14	358	14
19	364	13	362	13
20	368	13	366	13
21	372	13	371	13
22	376	13	374	13
23	380	13	378	13
24	383	13	382	13
25	387	13	386	13
26	391	13	390	13
27	395	13	394	13
28	399	13	398	13
29	403	13	402	13
30	407	13	406	13
31	411	13	410	13
32	415	14	414	14
33	419	14	418	14
34	424	14	423	14
35	428	14	427	14
36	433	15	431	15
37	438	15	436	15
38	442	15	441	15
39	448	16	447	16
40	454	16	452	16
41	460	17	459	17
42	466	18	465	18
43	474	19	472	19
44	482	20	480	20
45	491	21	490	21
46	502	24	501	24
47	517	27	515	27
48	536	32	534	32
49	568	45	567	45
50	600	45	600	45

**Table 7.6.19 Spring 1999 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:
High School End-of-Course Geometry**

Raw Score	Core 1		Core 2	
	Scale Score	Standard Error	Scale Score	Standard Error
0	0	49	0	49
1	188	49	184	49
2	223	35	219	35
3	245	29	241	29
4	260	26	257	26
5	273	24	270	24
6	284	22	280	22
7	293	21	290	21
8	302	20	298	20
9	309	19	306	19
10	316	18	313	18
11	323	18	320	18
12	329	17	326	17
13	336	17	332	17
14	341	16	338	16
15	347	16	343	16
16	352	16	349	16
17	357	16	354	16
18	363	16	359	16
19	368	15	365	15
20	373	15	370	15
21	378	15	374	15
22	383	15	380	15
23	388	15	384	15
24	393	15	389	15
25	398	15	394	15
26	403	15	399	15
27	408	16	404	16
28	413	16	410	16
29	418	16	415	16
30	423	16	420	16
31	429	16	426	16
32	435	17	431	17
33	441	17	437	17
34	448	18	443	17
35	454	18	450	18
36	461	19	457	19
37	469	20	465	20
38	478	21	473	21
39	487	22	483	22
40	498	24	493	24
41	510	26	506	26
42	526	29	521	29
43	548	36	542	35
44	583	49	578	49
45	600	49	600	49

**Table 7.6.20 Spring 1999 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:
High School End-of-Course Algebra II**

Raw Score	Core 1		Core 2	
	Scale Score	Standard Error	Scale Score	Standard Error
0	0	57	0	56
1	137	57	126	56
2	178	41	166	40
3	203	34	190	33
4	222	30	208	29
5	237	27	221	27
6	249	25	234	25
7	260	24	244	23
8	269	23	253	22
9	278	22	261	21
10	286	20	269	20
11	293	20	276	19
12	300	19	283	19
13	307	19	289	18
14	313	18	295	18
15	319	18	300	18
16	324	18	307	18
17	330	18	311	17
18	335	17	317	17
19	341	17	322	17
20	346	17	327	17
21	351	17	332	17
22	356	17	337	17
23	361	17	342	17
24	366	17	346	16
25	371	17	351	16
26	376	17	356	16
27	381	17	361	16
28	386	17	366	17
29	391	17	371	17
30	396	17	376	17
31	401	17	381	17
32	407	17	386	17
33	412	17	390	17
34	417	18	396	17
35	423	18	402	18
36	429	18	407	18
37	435	19	413	18
38	441	19	419	19
39	448	19	426	19
40	455	20	432	20
41	463	21	440	21
42	471	22	448	22
43	480	23	457	23
44	491	25	467	24
45	502	27	479	27
46	516	29	493	29
47	534	33	510	33
48	558	40	534	40
49	598	56	573	56
50	600	56	600	56

**Table 7.6.21 Spring 1999 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:
High School End-of-Course U.S. History**

Raw Score	Core 1		Core 2	
	Scale Score	Standard Error	Scale Score	Standard Error
0	0	61	0	61
1	90	61	90	61
2	135	44	134	44
3	161	37	160	37
4	180	33	180	32
5	196	30	195	29
6	209	27	209	27
7	221	25	219	25
8	231	24	230	24
9	240	23	239	23
10	248	22	247	22
11	256	21	255	21
12	263	20	262	20
13	271	20	269	20
14	277	20	275	19
15	283	19	282	19
16	289	19	288	19
17	295	19	293	19
18	300	18	299	18
19	306	18	304	18
20	311	17	309	17
21	316	17	315	17
22	321	17	319	17
23	326	17	324	17
24	330	17	329	17
25	335	17	334	17
26	339	17	339	17
27	344	16	343	17
28	348	16	348	17
29	353	16	352	17
30	357	16	357	17
31	362	16	362	17
32	367	16	366	17
33	371	16	371	17
34	376	16	375	17
35	380	16	380	17
36	385	16	385	17
37	389	17	389	17
38	394	17	394	17
39	398	17	398	17
40	403	17	404	17
41	407	17	409	17
42	413	17	414	17
43	418	17	419	18
44	423	18	424	18
45	429	18	430	19
46	434	19	436	19
47	440	19	442	19
48	446	19	448	20
49	453	20	455	20
50	459	20	462	21
51	467	22	470	22
52	474	22	478	23
53	483	23	487	23
54	492	25	497	25
55	503	27	508	27
56	516	28	521	29
57	531	31	536	32
58	550	36	555	36
59	576	43	582	44
60	588	61	591	61
61	600	61	600	61

**Table 7.6.22 Spring 1999 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:
High School End-of-Course World History to 1000 A.D./World Geography**

Raw Score	Core 1		Core 2	
	Scale Score	Standard Error	Scale Score	Standard Error
0	0	45	0	46
1	192	45	195	46
2	224	33	228	33
3	244	27	247	27
4	258	24	262	24
5	269	22	273	22
6	279	20	283	20
7	287	19	291	19
8	294	17	298	17
9	301	17	305	17
10	307	16	311	16
11	312	16	317	16
12	318	15	322	15
13	323	15	327	15
14	328	14	332	14
15	332	14	336	14
16	336	14	341	14
17	341	13	345	13
18	345	13	349	13
19	348	13	353	13
20	352	13	356	13
21	356	13	360	13
22	359	13	364	13
23	363	13	368	13
24	367	13	371	13
25	370	13	374	13
26	373	13	378	13
27	377	13	381	12
28	380	12	385	12
29	384	12	388	12
30	387	12	391	12
31	390	12	394	12
32	394	12	398	12
33	397	12	401	12
34	401	13	404	12
35	404	13	408	12
36	407	13	411	13
37	411	13	415	13
38	414	13	418	13
39	418	13	421	13
40	421	13	425	13
41	425	13	429	13
42	429	13	433	13
43	433	13	436	13
44	437	13	440	13
45	441	14	444	13
46	446	14	448	14
47	450	14	453	14
48	455	15	458	15
49	459	15	462	15
50	465	16	468	16
51	470	16	473	16
52	477	17	479	17
53	483	17	485	17
54	490	18	493	18
55	498	20	501	20
56	508	22	510	22
57	519	24	521	24
58	533	27	535	27
59	553	33	555	32
60	585	45	587	45
61	600	45	600	45

**Table 7.6.23 Spring 1999 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:
High School End-of-Course World History From 1000 A.D./ World Geography**

Raw Score	Core 1		Core 2	
	Scale Score	Standard Error	Scale Score	Standard Error
0	0	50	0	50
1	175	50	175	50
2	210	35	210	35
3	232	29	231	30
4	247	26	247	26
5	259	23	260	23
6	270	21	270	22
7	279	20	279	20
8	286	19	287	19
9	294	18	293	18
10	300	17	300	17
11	306	17	306	17
12	312	16	312	16
13	317	16	317	16
14	322	16	322	16
15	326	15	327	15
16	331	15	331	15
17	335	15	336	15
18	339	14	340	14
19	343	14	343	14
20	347	14	347	14
21	351	14	351	14
22	355	13	355	14
23	358	13	359	13
24	362	13	362	13
25	366	13	366	13
26	369	13	369	13
27	372	13	373	13
28	376	13	376	13
29	379	13	379	13
30	382	13	383	13
31	385	13	386	13
32	389	13	390	13
33	392	13	393	13
34	396	13	396	13
35	399	13	400	13
36	402	13	403	13
37	405	13	407	13
38	409	13	410	13
39	412	13	413	13
40	416	13	417	13
41	419	13	421	13
42	423	14	424	14
43	427	14	428	14
44	431	14	432	14
45	435	14	436	14
46	438	14	440	14
47	443	15	444	15
48	447	15	448	15
49	452	15	453	15
50	456	16	458	16
51	462	16	463	16
52	467	17	468	17
53	472	17	474	17
54	479	18	480	18
55	485	18	487	19
56	493	20	494	20
57	502	21	503	21
58	512	23	513	23
59	523	25	525	25
60	538	29	540	29
61	559	35	561	35
62	594	49	595	49
63	600	49	600	49

**Table 7.6.24 Spring 1999 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:
High School End-of-Course Earth Science**

Raw Score	Core 1		Core 2	
	Scale Score	Standard Error	Scale Score	Standard Error
0	0	52	0	52
1	171	52	175	52
2	209	37	211	37
3	231	31	234	31
4	248	27	250	27
5	260	25	264	25
6	272	23	275	23
7	281	22	285	22
8	290	21	293	21
9	298	19	301	19
10	305	19	308	19
11	312	18	315	18
12	318	18	322	18
13	324	17	328	17
14	330	17	334	17
15	336	17	339	17
16	341	16	345	16
17	347	16	350	16
18	352	16	355	16
19	356	16	360	16
20	361	16	365	16
21	366	16	370	16
22	371	15	375	16
23	376	15	380	16
24	380	15	384	16
25	385	15	389	16
26	390	15	394	16
27	395	15	399	16
28	399	15	403	16
29	404	16	408	16
30	409	16	414	16
31	414	16	418	16
32	419	16	424	16
33	423	16	429	16
34	429	16	434	17
35	434	17	440	17
36	440	17	445	17
37	445	17	451	18
38	452	18	458	18
39	458	18	464	19
40	465	19	471	19
41	472	19	479	20
42	480	21	487	21
43	489	22	496	22
44	498	23	506	24
45	509	25	518	25
46	522	27	531	28
47	539	31	548	31
48	561	37	571	38
49	598	52	585	52
50	600	52	600	52

**Table 7.6.25 Spring 1999 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:
High School End-of-Course Biology**

Raw Score	Core 1		Core 2	
	Scale Score	Standard Error	Scale Score	Standard Error
0	0	44	0	44
1	214	44	215	44
2	245	32	247	32
3	264	26	266	26
4	278	23	280	23
5	290	21	291	21
6	299	19	301	19
7	307	18	309	18
8	315	17	316	17
9	322	17	323	17
10	328	16	329	16
11	333	16	335	16
12	339	15	341	15
13	344	15	345	15
14	349	15	351	14
15	354	14	355	14
16	358	14	360	14
17	363	14	364	14
18	367	14	368	13
19	371	13	373	13
20	376	13	377	13
21	380	13	381	13
22	384	13	385	13
23	388	13	389	13
24	392	13	393	13
25	396	13	397	13
26	400	13	401	13
27	404	13	405	13
28	408	13	409	13
29	412	13	412	13
30	416	13	417	13
31	420	13	421	13
32	424	13	425	13
33	428	14	429	14
34	433	14	434	14
35	438	14	438	14
36	442	14	443	14
37	447	15	448	15
38	452	15	453	15
39	458	16	458	16
40	464	16	464	16
41	470	17	470	16
42	477	17	477	17
43	484	18	484	18
44	492	19	492	19
45	501	21	501	21
46	512	23	512	23
47	526	26	526	26
48	545	32	545	32
49	577	44	577	44
50	600	44	600	44

**Table 7.6.26 Spring 1999 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:
High School End-of-Course Chemistry**

Raw Score	Core 1		Core 2	
	Scale Score	Standard Error	Scale Score	Standard Error
0	0	45	0	49
1	195	45	177	49
2	227	33	215	36
3	247	27	239	30
4	261	24	256	26
5	273	22	270	23
6	283	20	281	21
7	292	19	291	20
8	300	18	299	19
9	307	17	307	18
10	313	17	314	17
11	319	16	321	17
12	325	15	326	16
13	330	15	332	16
14	335	15	338	15
15	340	15	343	15
16	345	15	348	15
17	350	14	353	15
18	354	14	357	14
19	358	14	362	14
20	363	14	367	14
21	367	14	371	14
22	371	14	376	14
23	375	14	380	14
24	379	13	384	14
25	384	13	388	14
26	388	13	392	14
27	392	13	397	14
28	396	14	401	14
29	400	14	405	14
30	404	14	410	14
31	408	14	414	14
32	412	14	418	14
33	417	14	423	14
34	421	14	428	15
35	426	15	432	15
36	431	15	437	15
37	436	15	442	15
38	441	15	448	15
39	446	16	453	16
40	453	16	459	16
41	459	17	466	17
42	465	18	472	18
43	473	19	480	19
44	481	20	489	20
45	491	21	498	22
46	502	23	510	24
47	516	27	524	27
48	536	32	544	32
49	568	45	576	45
50	600	45	600	45

**Table 7.6.27 Spring 1999 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:
High School End-of-Course Writing**

RS	Core 1/ Core 1		Core 1/ Core 2		Core 2/ Core 1		Core 2/ Core 2	
	SS	SE	SS	SE	SS	SE	SS	SE
0	0	47	0	47	0	47	0	46
1	28	47	26	47	26	47	27	46
2	53	47	51	47	52	47	52	46
3	78	47	76	47	78	47	77	46
4	103	47	101	47	104	47	102	46
5	128	47	126	47	130	47	127	46
6	153	47	151	47	156	47	152	46
7	178	47	176	47	182	47	177	46
8	214	35	212	34	217	34	211	33
9	237	29	233	29	238	28	232	28
10	253	25	250	25	254	25	247	25
11	266	23	262	22	267	22	259	22
12	277	21	272	21	277	21	269	21
13	286	20	282	20	286	19	278	19
14	295	19	290	19	294	18	286	18
15	302	18	297	18	301	17	293	17
16	309	17	304	17	308	17	300	17
17	315	17	311	17	314	17	306	17
18	321	17	317	17	320	16	312	16
19	327	16	323	17	325	16	317	16
20	333	16	329	17	330	15	323	16
21	339	16	335	16	336	15	329	16
22	344	16	341	16	341	15	334	16
23	350	16	347	16	346	15	339	16
24	355	15	353	16	351	15	345	16
25	360	15	358	16	356	15	350	15
26	365	15	364	16	361	15	355	15
27	371	15	370	16	366	15	361	15
28	376	15	375	16	371	15	366	15
29	381	15	380	16	376	15	371	15
30	386	15	386	16	381	15	376	15
31	392	15	391	15	387	15	382	15
32	396	15	396	15	392	15	387	16
33	402	15	402	15	397	15	392	16
34	407	15	407	15	402	16	398	16
35	412	15	412	15	408	16	403	16
36	417	16	417	15	413	16	409	16
37	423	16	423	16	419	16	414	16
38	428	16	428	16	424	16	420	16
39	434	16	433	16	430	16	426	16
40	440	16	439	16	436	17	432	17
41	446	17	445	17	442	17	438	17
42	452	17	451	17	449	17	445	17
43	458	17	458	17	456	18	452	18
44	465	18	465	18	463	18	459	18
45	472	18	472	18	471	19	467	19
46	480	19	479	19	479	20	475	20
47	489	20	488	20	489	21	484	21
48	498	21	497	21	499	22	494	21
49	508	22	507	22	511	23	505	23
50	521	24	518	24	524	25	518	25
51	535	27	532	26	538	27	533	27
52	555	32	550	31	558	32	552	32
53	586	45	580	44	588	43	583	44
54	600	45	600	44	600	43	600	44

REFERENCES

- Angoff, W. H. (1971). Scales, norms, and equivalent scores. In R. L. Thorndike (Ed.), *Educational measurement* (2nd ed.). Washington, D.C.: American Council on Education.
- Camilli, G. & Shepard, L.A. (1994). *Methods for identifying biased test items*. Thousand Oaks, CA: SAGE Publications.
- Crocker, L. & Algina, J. (1986). *Introduction to classical and modern test theory*. New York, NY: Holt Rinehart Wilson.
- Haertel, E. H. (1996). *Estimating the decision consistency from a single administration of a performance assessment battery. A report on the National Board of Professional Teaching Standards McGEN Assessment*. Palo Alto, CA: Stanford University.
- Linacre, J. M. & Wright, B. D. (1991). *BIGSTEPS*. (Rasch model computer program). Chicago, IL: MESA Press.
- Livingston, S. A. & Lewis, C. (1995). Estimating the consistency and accuracy of classifications based on test scores. *Journal of Educational Measurement*, 32, 179-1987.
- Lord, F. M. & Wingersky, M. S. (1984). Comparison of IRT true-score and equipercentile observed-score "equatings." *Applied Psychological Measurement*, 8, 452-461.
- Masters, G. N. (1982). A Rasch model for partial credit scoring. *Psychometrika*, 47, 149-174.
- Rasch, G. (1980). *Probabilistic models for some intelligence and attainment tests*. Chicago, IL: University of Chicago Press.
- Rentz, R. R. (1980). *TRIAN*. (Rasch model and traditional statistics computer program). Athens, GA: Georgia State University.
- Reckase, M. D. (2000, June). *The evolution of the NAEP Achievement Levels Setting Process: A summary of the research and development efforts conducted by ACT*. (A report for the National Assessment Governing Board, Washington, DC). Iowa City, IA: ACT, Inc.
- Samejima, F. (1969). Estimation of latent ability using a response pattern of graded scores. *Psychometric Monograph*, 17.
- SAS Institute. (1989). *SAS System: Version 6.08*. (General purpose statistical software system). Cary, NC: The SAS Institute, Inc.
- Thissen, D. & Steinberg, L. (1986). A taxonomy of item response models. *Psychometrika*, 51, 567-577.
- Virginia Department of Education. (1999, February). *Standards of Learning (SOL) tests validity and reliability information: Spring 1998 administration*. (Report). Virginia Department of Education. Division of Assessment and Reporting. Richmond, VA: Author.
- Wright, B. D. & Stone, M. H. (1979). *Best test design*. Chicago, IL: MESA Press.
- Young, M. J. & Yoon, B. (1998, April). *Estimating the consistency and accuracy of classifications in a standards-referenced assessment*. (CSE Technical Report 475). Center for the Study of Evaluation, National Center for Research on Evaluation, Standards, and Student Testing. Los Angeles, CA: University of California, Los Angeles.

APPENDIX A

SOL Reporting Category Scale Score Conversion Tables

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

1

Grade 3 Mathematics
Reporting Category 006: Number and Number Sense

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	12	9	12	9
2	17	14	17	14
3	20	17	20	17
4	22	19	22	19
5	24	21	24	21
6	26	23	26	23
7	28	25	28	25
8	30	27	30	27
9	32	29	32	29
10	35	32	35	32
11	38	35	38	35
12	42	39	42	39
13	47	50	46	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

2

Grade 3 Mathematics
Reporting Category 007: Computation and Estimation

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	17	14	17	14
2	21	18	21	18
3	24	20	24	20
4	26	23	26	23
5	28	25	28	25
6	30	27	30	27
7	32	29	32	29
8	34	31	34	31
9	37	34	37	34
10	41	38	41	38
11	45	50	45	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

3

Grade 3 Mathematics
Reporting Category 008: Measurement and Geometry

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	12	9	12	9
2	17	14	17	13
3	20	17	20	17
4	22	19	22	19
5	24	21	24	21
6	26	23	27	23
7	28	25	29	26
8	31	28	31	28
9	33	30	34	31
10	36	33	37	34
11	41	38	42	39
12	46	50	47	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

4

Grade 3 Mathematics
Reporting Category 009: Probability and Statistics

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	20	16	20	16
2	24	20	24	21
3	27	23	28	24
4	30	26	30	27
5	33	30	34	30
6	38	34	38	34
7	42	50	42	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

5

Grade 3 Mathematics

Reporting Category 010: Patterns, Functions, and Algebra

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	18	14	18	14
2	23	19	23	19
3	26	23	26	22
4	30	26	29	26
5	33	30	33	29
6	38	34	38	34
7	43	50	42	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

6

Grade 3 History
Reporting Category 011: History

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	20	14	18	12
2	25	19	23	18
3	28	23	27	22
4	31	26	30	25
5	34	28	33	27
6	36	31	35	30
7	39	34	38	33
8	42	37	42	36
9	47	42	47	42
10	52	50	52	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

7

Grade 3 History
Reporting Category 012: Geography

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	17	12	17	11
2	22	17	22	17
3	26	21	26	20
4	29	24	28	23
5	32	26	31	26
6	34	29	34	28
7	37	32	36	31
8	40	35	40	34
9	45	40	44	39
10	49	50	49	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

8

Grade 3 History
Reporting Category 013: Economics

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	18	13	19	14
2	24	19	24	19
3	28	23	28	23
4	31	26	31	26
5	34	28	34	28
6	36	31	37	31
7	39	34	39	34
8	42	37	43	37
9	47	42	47	42
10	51	50	52	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

9

Grade 3 History
Reporting Category 014: Civics

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	17	12	18	13
2	22	17	23	18
3	26	21	27	22
4	29	24	30	25
5	31	26	33	28
6	34	29	36	30
7	37	32	39	33
8	41	35	42	37
9	46	41	47	42
10	51	50	52	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

10

Grade 3 Science
Reporting Category 015: Scientific Investigation

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	11	7	10	7
2	16	12	15	12
3	19	15	19	15
4	22	18	21	18
5	24	21	24	20
6	27	23	27	23
7	30	26	29	26
8	33	29	33	29
9	38	35	38	34
10	43	50	43	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

Grade 3 Science
Reporting Category 016: Force, Motion, Energy, and Matter

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	16	12	15	12
2	21	17	20	17
3	24	21	24	20
4	27	24	26	23
5	30	26	29	26
6	32	29	32	28
7	35	32	35	31
8	38	35	38	35
9	43	40	43	39
10	48	50	48	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

12

Grade 3 Science
Reporting Category 017: Life Processes and Living Systems

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	17	13	17	14
2	22	19	23	19
3	26	23	26	23
4	29	26	29	26
5	32	29	32	28
6	35	32	35	31
7	38	35	38	34
8	42	38	41	38
9	47	44	46	43
10	52	50	51	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

13

Grade 3 Science
Reporting Category 018: Earth/Space Systems and Cycles

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	15	11	16	12
2	20	16	21	17
3	23	19	24	20
4	26	22	27	23
5	28	25	29	26
6	31	27	32	28
7	34	30	35	31
8	37	34	38	35
9	42	38	43	40
10	46	50	48	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

14

Grade 3 Reading+Writing
Reporting Category 001: Use word analysis strategies

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	17	13	15	11
2	21	17	20	16
3	24	20	24	20
4	26	23	26	22
5	29	25	29	25
6	31	27	31	27
7	33	29	34	30
8	36	32	37	33
9	40	37	41	37
10	44	50	45	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

15

Grade 3 Reading+Writing

Reporting Category 002: Understand a variety of printed mat

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	17	13	17	14
2	21	17	22	18
3	24	20	24	21
4	26	22	27	23
5	28	25	29	25
6	31	27	31	27
7	33	29	34	30
8	36	32	37	33
9	40	36	41	37
10	44	50	45	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

16

Grade 3 Reading+Writing
Reporting Category 003: Understand elements of literature

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	23	19	22	18
2	28	24	28	23
3	33	28	32	27
4	38	34	37	33
5	43	50	42	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

17

Grade 3 Reading+Writing
Reporting Category 004: Plan, compose, and revise paragraph

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	17	12	17	11
2	21	16	21	15
3	24	19	24	18
4	27	21	26	20
5	29	23	28	22
6	30	25	29	24
7	32	27	31	26
8	34	28	33	27
9	36	30	35	29
10	38	33	37	31
11	41	36	40	34
12	45	40	44	39
13	49	50	48	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

18

Grade 3 Reading+Writing
Reporting Category 005: Edit for grammar, capitalization, p

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	18	12	20	14
2	23	17	25	19
3	27	21	29	23
4	31	25	32	26
5	34	28	36	30
6	39	33	41	35
7	44	50	46	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

Grade 3 Reading+Writing
Reporting Category 019: English: Reading

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	12	9	11	8
2	16	12	15	12
3	18	15	18	14
4	20	16	19	16
5	21	18	21	18
6	22	19	22	19
7	23	20	23	20
8	25	21	24	21
9	25	22	25	22
10	26	23	26	23
11	27	24	27	24
12	28	25	28	25
13	29	26	29	26
14	30	26	30	27
15	31	27	31	27
16	32	28	32	28
17	33	29	33	29
18	34	30	34	30
19	35	31	35	32
20	36	33	36	33
21	37	34	38	34
22	39	36	39	36
23	41	38	42	38
24	45	42	45	42
25	48	50	49	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

20

Grade 3 Reading+Writing
Reporting Category 020: English: Writing

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	13	7	13	7
2	17	11	17	12
3	20	14	20	14
4	22	16	22	16
5	23	18	24	18
6	25	19	25	19
7	26	21	26	21
8	28	22	28	22
9	29	23	29	23
10	30	24	30	24
11	31	26	31	26
12	33	27	32	27
13	34	28	34	28
14	35	30	35	30
15	37	31	37	31
16	39	33	38	33
17	41	35	40	35
18	43	38	43	37
19	48	42	47	42
20	52	50	51	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

Grade 5 Reading
Reporting Category 001: Use word analysis strategies

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	16	13	16	13
2	22	19	22	19
3	27	24	27	24
4	31	28	32	29
5	37	34	38	35
6	43	50	44	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

Grade 5 Reading

Reporting Category 002: Understand a variety of printed mat

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	12	9	10	8
2	16	13	14	12
3	18	16	17	15
4	20	18	19	17
5	22	19	21	19
6	23	21	23	20
7	24	22	24	22
8	25	23	25	23
9	27	24	27	24
10	28	25	28	26
11	29	27	29	27
12	30	28	30	28
13	31	29	32	29
14	32	30	33	31
15	34	32	35	32
16	35	33	36	34
17	37	35	38	36
18	40	37	41	39
19	44	41	45	43
20	47	50	49	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

23

Grade 5 Reading
Reporting Category 003: Understand elements of literature

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	12	10	12	9
2	17	15	16	14
3	20	18	19	17
4	22	20	22	19
5	24	22	24	21
6	26	24	26	23
7	28	25	27	25
8	29	27	29	27
9	31	29	31	28
10	33	30	33	30
11	35	32	34	32
12	36	34	36	34
13	39	36	39	37
14	42	39	42	40
15	46	44	47	44
16	50	50	51	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

24

Grade 5 Mathematics
Reporting Category 006: Number and Number Sense

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	21	16	20	15
2	25	20	24	19
3	28	23	27	22
4	31	26	30	25
5	34	28	33	28
6	37	31	36	31
7	41	36	40	35
8	45	50	44	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

25

Grade 5 Mathematics
Reporting Category 007: Computation and Estimation

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	14	8	13	8
2	18	13	18	12
3	21	16	21	16
4	23	18	23	18
5	26	20	25	20
6	27	22	27	22
7	29	24	30	24
8	32	26	32	27
9	34	29	34	29
10	37	32	37	32
11	41	36	42	37
12	45	50	46	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

Grade 5 Mathematics
Reporting Category 008: Measurement and Geometry

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	14	9	15	9
2	20	14	20	14
3	23	18	23	18
4	26	21	26	21
5	29	23	29	23
6	31	26	31	26
7	33	28	34	28
8	36	31	36	31
9	39	33	39	33
10	42	37	42	37
11	48	42	47	42
12	52	50	52	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

27

Grade 5 Mathematics
Reporting Category 009: Probability and Statistics

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	21	15	20	14
2	26	20	25	19
3	29	24	29	23
4	33	27	32	27
5	36	30	36	31
6	40	34	40	35
7	45	39	46	41
8	50	50	52	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

28

Grade 5 Mathematics
Reporting Category 010: Patterns, Functions, and Algebra

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	19	14	19	14
2	24	19	24	19
3	27	22	28	22
4	30	25	30	25
5	32	27	33	28
6	35	29	35	30
7	37	32	38	33
8	40	35	41	36
9	44	39	45	40
10	48	50	49	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

Grade 5 History
Reporting Category 011: History

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	15	7	15	7
2	20	12	21	13
3	24	16	24	16
4	26	19	27	19
5	29	21	29	21
6	31	23	31	23
7	33	25	33	25
8	35	27	35	27
9	37	29	37	29
10	39	31	39	31
11	41	33	42	34
12	44	36	44	36
13	47	40	48	40
14	53	45	53	45
15	58	50	58	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

30

Grade 5 History
Reporting Category 012: Geography

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	14	7	13	5
2	19	12	18	11
3	23	15	22	14
4	25	18	24	17
5	27	20	26	19
6	29	22	29	21
7	31	24	30	23
8	33	25	32	25
9	35	27	34	27
10	37	29	36	29
11	39	31	39	31
12	41	34	41	34
13	45	37	44	37
14	50	42	49	42
15	54	50	54	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

31

Grade 5 History
Reporting Category 013: Economics

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	27	19	26	19
2	33	25	32	25
3	38	30	37	30
4	44	36	43	36
5	50	50	49	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

32

Grade 5 History
Reporting Category 014: Civics

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	25	18	26	19
2	32	24	33	25
3	37	29	38	31
4	43	35	44	37
5	49	50	50	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

Grade 5 Science
Reporting Category 015: Scientific Investigation

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	16	12	16	12
2	21	17	20	17
3	24	20	24	20
4	27	23	26	22
5	29	26	29	25
6	32	28	31	27
7	35	31	33	30
8	38	34	36	33
9	42	38	41	37
10	46	50	45	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

Grade 5 Science
Reporting Category 016: Force, Motion, Energy, and Matter

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	13	9	12	9
2	18	14	18	14
3	22	18	21	18
4	25	21	24	21
5	28	24	27	23
6	31	27	30	26
7	34	30	33	29
8	38	34	37	33
9	43	40	42	38
10	48	50	47	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

35

Grade 5 Science
Reporting Category 017: Life Processes and Living Systems

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	16	12	17	14
2	22	18	23	19
3	25	21	27	23
4	28	24	30	26
5	31	27	32	28
6	34	30	35	31
7	37	33	38	34
8	41	37	42	38
9	46	43	47	43
10	52	50	52	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

36

Grade 5 Science
Reporting Category 018: Earth/Space Systems and Cycles

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	13	9	16	12
2	19	15	21	17
3	23	20	25	21
4	27	23	28	24
5	30	26	30	26
6	33	29	33	29
7	36	32	36	32
8	40	36	40	36
9	45	41	45	41
10	49	50	50	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

37

Grade 5 Computer/Technology
Reporting Category 019: Basic Understanding of Computer Tec

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	17	15	23	20
2	24	21	29	26
3	30	27	34	31
4	36	34	40	38
5	43	50	46	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

38

Grade 5 Computer/Technology
Reporting Category 020: Basic Operational Skills

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	12	11	11	10
2	17	16	16	15
3	20	19	19	18
4	23	21	22	20
5	25	23	24	22
6	27	25	26	24
7	29	27	27	26
8	31	29	29	28
9	33	31	31	30
10	34	33	33	31
11	37	35	35	33
12	39	38	37	36
13	42	41	40	39
14	47	46	45	44
15	51	50	49	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

Grade 5 Computer/Technology
Reporting Category 021: Using Technology to Solve Problems

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	19	17	19	17
2	24	22	24	22
3	27	25	27	25
4	29	27	29	28
5	32	30	32	30
6	34	32	34	32
7	37	35	37	35
8	40	38	40	38
9	44	42	44	42
10	49	50	48	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

40

Grade 8 Reading

Reporting Category 001: Understand a variety of printed mat

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	11	8	8	5
2	15	12	13	10
3	18	15	16	13
4	20	17	18	15
5	22	19	20	17
6	24	20	22	19
7	25	22	23	20
8	26	23	25	22
9	27	24	26	23
10	29	26	27	24
11	30	27	29	26
12	31	28	30	27
13	32	29	31	28
14	34	30	33	30
15	35	32	34	31
16	36	33	36	33
17	38	35	37	34
18	40	37	40	36
19	43	40	42	39
20	47	44	47	44
21	51	50	51	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

41

Grade 8 Reading
Reporting Category 002: Understand elements of literature

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	10	7	13	10
2	14	11	17	14
3	17	14	20	17
4	19	16	22	19
5	21	18	23	20
6	23	20	25	22
7	24	21	26	23
8	26	23	28	24
9	27	24	29	26
10	28	25	30	27
11	30	27	31	28
12	31	28	32	29
13	33	29	33	30
14	34	31	35	32
15	36	32	36	33
16	37	34	38	34
17	39	36	39	36
18	41	38	41	38
19	44	41	44	41
20	49	46	48	45
21	53	50	52	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

42

Grade 8 Mathematics
Reporting Category 005: Number and Number Sense

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	20	16	19	15
2	25	21	25	20
3	28	24	29	24
4	31	27	32	28
5	34	30	35	31
6	38	33	39	34
7	42	38	43	39
8	47	50	48	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

43

Grade 8 Mathematics
Reporting Category 006: Computation and Estimation

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	18	13	19	14
2	23	19	24	19
3	27	22	28	23
4	31	26	31	26
5	34	29	34	29
6	39	34	39	34
7	43	50	43	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

44

Grade 8 Mathematics
Reporting Category 007: Measurement and Geometry

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	15	10	14	10
2	19	15	19	15
3	22	18	22	18
4	25	21	25	20
5	27	23	27	22
6	29	25	29	24
7	31	26	31	26
8	32	28	32	28
9	34	30	34	30
10	36	32	36	32
11	38	34	39	34
12	41	36	41	37
13	44	39	44	40
14	49	44	49	45
15	53	50	54	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

45

Grade 8 Mathematics
Reporting Category 008: Probability and Statistics

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	17	13	17	12
2	22	17	21	17
3	25	20	25	20
4	27	23	27	23
5	29	25	29	25
6	31	27	32	27
7	33	29	34	29
8	36	31	36	31
9	38	34	38	34
10	41	37	41	37
11	46	41	46	41
12	50	50	50	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

46

Grade 8 Mathematics

Reporting Category 009: Patterns, Functions, and Algebra

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	19	15	19	15
2	22	18	22	18
3	25	21	25	21
4	26	22	26	22
5	28	24	28	24
6	29	25	29	25
7	30	26	30	26
8	32	27	31	27
9	33	29	32	28
10	34	30	34	29
11	35	31	35	31
12	36	32	36	32
13	37	33	37	33
14	39	35	39	34
15	41	37	40	36
16	43	39	43	38
17	46	42	46	42
18	50	50	49	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

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Grade 8 History

Reporting Category 010: History: First Contact to 1877

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	20	13	20	13
2	25	18	25	18
3	29	21	29	21
4	32	25	32	24
5	35	28	35	28
6	39	32	38	31
7	44	37	43	36
8	49	50	48	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

48

Grade 8 History
Reporting Category 011: History: 1877 to the Present

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	18	11	19	12
2	23	16	23	16
3	26	19	26	19
4	29	21	29	22
5	31	24	31	24
6	33	26	33	26
7	35	28	35	28
8	38	30	37	30
9	40	33	40	32
10	43	36	43	35
11	48	41	47	40
12	52	50	52	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

Grade 8 History
Reporting Category 012: Geography

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	17	9	17	10
2	22	15	22	15
3	26	18	26	19
4	29	22	29	22
5	32	25	32	25
6	35	27	35	28
7	38	31	38	31
8	42	34	41	34
9	47	40	46	39
10	52	50	51	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

50

Grade 8 History
Reporting Category 013: Economics

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	24	16	24	17
2	28	21	28	21
3	31	24	32	25
4	34	27	35	28
5	37	30	38	31
6	40	33	41	34
7	45	38	46	39
8	49	50	50	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

51

Grade 8 History
Reporting Category 014: Civics

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	18	11	18	11
2	23	16	23	16
3	26	19	26	19
4	29	21	29	21
5	31	24	31	24
6	33	26	33	26
7	36	28	35	28
8	38	31	38	30
9	41	34	40	33
10	44	37	44	36
11	49	42	48	41
12	54	50	53	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

52

Grade 8 Science
Reporting Category 015: Scientific Investigation

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	18	16	13	12
2	22	21	18	17
3	25	23	22	20
4	28	26	25	23
5	30	28	27	25
6	32	30	30	28
7	34	32	32	30
8	37	35	35	33
9	40	38	38	36
10	44	42	43	41
11	48	50	47	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

Grade 8 Science
Reporting Category 016: Force, Motion, Energy, and Matter

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	12	10	13	12
2	16	15	18	16
3	19	18	21	19
4	22	20	23	21
5	23	22	25	23
6	25	24	26	25
7	27	25	28	26
8	28	27	29	28
9	30	28	31	29
10	31	30	32	30
11	33	31	33	32
12	35	33	35	33
13	36	35	37	35
14	38	36	38	37
15	40	39	41	39
16	43	42	43	42
17	48	46	48	46
18	52	50	52	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

54

Grade 8 Science
Reporting Category 017: Life Systems

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	18	16	20	18
2	24	22	25	23
3	28	26	29	27
4	32	30	32	30
5	36	34	36	34
6	41	40	41	39
7	47	50	46	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

Grade 8 Science
Reporting Category 018: Ecosystems

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	18	16	18	16
2	23	21	23	21
3	26	24	27	25
4	30	28	30	28
5	33	31	34	32
6	36	34	37	35
7	41	39	43	41
8	46	50	48	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

Grade 8 Science
Reporting Category 019: Earth and Space Systems

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	18	16	19	16
2	24	21	25	22
3	28	26	29	27
4	32	30	34	32
5	38	36	40	37
6	43	50	45	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

57

Grade 8 Computer/Technology
Reporting Category 020: Understanding of Application Softwa

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	7	3	7	4
2	12	9	12	9
3	15	12	16	12
4	18	14	18	15
5	20	16	20	16
6	22	18	22	18
7	23	20	23	20
8	25	21	24	21
9	26	23	26	22
10	28	24	27	24
11	29	26	28	25
12	30	27	30	26
13	32	28	31	28
14	33	30	32	29
15	34	31	33	30
16	36	32	35	32
17	37	34	36	33
18	39	35	38	35
19	41	37	40	36
20	43	39	42	38
21	45	42	44	41
22	48	45	47	44
23	53	50	52	49
24	58	50	57	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

58

Grade 8 Computer/Technology
Reporting Category 021: Understanding of Electronic Communi

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	15	10	14	8
2	21	16	19	14
3	25	20	23	18
4	29	24	28	22
5	35	30	33	28
6	40	50	38	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

Grade 8 Computer/Technology
Reporting Category 022: Ability to Access, Retrieve, and An

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	18	14	19	16
2	22	18	23	20
3	25	21	26	23
4	27	24	29	25
5	30	26	31	28
6	32	28	33	30
7	34	31	36	32
8	37	34	39	35
9	42	38	43	40
10	46	50	47	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

60

High School End-of-Course Reading
Reporting Category 001: Understand a variety of printed mat

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	14	12	15	13
2	18	17	19	17
3	21	19	22	20
4	23	22	24	22
5	25	24	26	24
6	27	26	28	26
7	29	27	30	28
8	31	29	32	30
9	33	32	34	32
10	36	34	37	35
11	40	39	41	39
12	44	50	44	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

61

High School End-of-Course Reading
Reporting Category 002: Understand elements of literature

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	11	10	11	10
2	15	14	15	14
3	18	17	18	17
4	20	19	20	19
5	22	21	22	21
6	24	22	24	22
7	25	24	25	24
8	26	25	26	25
9	27	26	27	26
10	29	27	29	27
11	30	28	30	28
12	31	29	31	30
13	32	31	32	31
14	33	32	33	32
15	34	33	34	33
16	35	34	35	34
17	37	35	37	35
18	38	37	38	37
19	39	38	39	38
20	41	40	41	40
21	43	42	43	42
22	46	45	46	45
23	51	49	51	49
24	55	50	55	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

62

High School End-of-Course Reading
Reporting Category 003: Locate and use information from a v

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	23	21	22	20
2	28	25	27	24
3	31	29	30	28
4	35	33	34	32
5	40	37	39	37
6	44	50	43	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

63

High School End-of-Course Algebra I
Reporting Category 001: Expressions and Operations

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	20	15	21	15
2	25	19	26	20
3	28	22	29	23
4	30	25	31	25
5	33	27	33	28
6	35	29	35	30
7	37	32	37	32
8	40	34	40	34
9	43	37	42	36
10	46	40	45	39
11	51	45	50	44
12	56	50	54	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

64

High School End-of-Course Algebra I
Reporting Category 002: Relations and Functions

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	22	16	22	16
2	27	21	27	21
3	30	24	30	24
4	32	26	32	26
5	35	29	35	29
6	37	31	37	31
7	39	33	39	33
8	41	35	41	35
9	44	38	44	38
10	47	41	47	41
11	52	46	52	46
12	56	50	56	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

65

High School End-of-Course Algebra I
Reporting Category 003: Equations and Inequalities

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	16	10	16	10
2	20	15	21	15
3	23	18	24	18
4	26	20	26	21
5	28	22	28	22
6	29	24	30	24
7	31	25	31	26
8	32	27	33	27
9	34	28	34	29
10	35	30	36	30
11	37	31	37	32
12	39	33	39	33
13	40	35	41	35
14	42	37	43	37
15	44	39	45	39
16	47	42	48	42
17	52	47	53	47
18	57	50	57	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

66

High School End-of-Course Algebra I
Reporting Category 004: Statistics

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	22	16	21	16
2	26	21	26	20
3	30	24	29	23
4	33	27	32	26
5	36	30	35	29
6	39	33	38	32
7	44	38	42	37
8	48	50	47	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

67

High School End-of-Course Geometry
Reporting Category 001: Lines and Angles

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	14	9	14	10
2	18	14	19	14
3	21	17	22	18
4	24	20	24	20
5	26	22	27	22
6	29	24	29	25
7	31	27	31	27
8	34	29	33	29
9	37	33	36	32
10	41	37	41	37
11	45	50	45	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

68

High School End-of-Course Geometry
Reporting Category 002: Triangles and Logic

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	17	13	17	12
2	22	18	22	17
3	26	21	25	20
4	28	24	28	23
5	31	26	30	26
6	33	28	32	28
7	35	31	35	30
8	37	33	37	33
9	40	35	40	35
10	43	39	43	39
11	48	44	48	44
12	52	50	53	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

High School End-of-Course Geometry
Reporting Category 003: Polygons and Circles

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	18	14	19	14
2	23	19	24	20
3	27	22	28	23
4	30	25	31	26
5	33	28	33	29
6	35	31	36	31
7	38	34	39	34
8	42	37	42	38
9	47	42	47	43
10	51	50	52	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

70

High School End-of-Course Geometry
Reporting Category 004: Three-Dimensional Figures

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	25	20	24	19
2	30	25	29	25
3	34	29	34	29
4	38	33	38	33
5	43	38	43	38
6	48	50	47	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

71

High School End-of-Course Geometry
Reporting Category 005: Coordinate Relations, Transformatio

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	25	20	25	21
2	30	26	30	26
3	34	29	34	30
4	38	33	39	34
5	43	38	44	39
6	48	50	49	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

72

High School End-of-Course Algebra II
Reporting Category 001: Expressions and Operations

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	19	12	19	12
2	23	17	24	17
3	27	20	27	20
4	29	23	30	23
5	32	25	32	25
6	35	28	35	28
7	37	30	37	30
8	41	34	41	34
9	45	38	45	38
10	50	50	50	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

73

High School End-of-Course Algebra II
Reporting Category 002: Relations and Functions

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	19	11	19	11
2	24	17	24	16
3	28	20	27	20
4	30	23	30	23
5	33	26	33	25
6	36	28	35	28
7	38	31	38	30
8	41	34	40	33
9	45	37	44	36
10	50	42	49	41
11	55	50	54	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

74

High School End-of-Course Algebra II
Reporting Category 003: Equations and Inequalities

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	22	15	22	15
2	26	19	26	19
3	29	22	29	22
4	31	25	32	25
5	34	27	34	27
6	36	29	36	29
7	38	31	38	32
8	41	34	41	35
9	45	38	46	39
10	49	50	49	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

75

High School End-of-Course Algebra II
Reporting Category 004: Analytical Geometry

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	25	18	25	18
2	30	23	30	23
3	35	27	34	27
4	38	31	38	31
5	44	36	43	36
6	48	50	48	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

76

High School End-of-Course Algebra II
Reporting Category 005: Systems of Equations/Inequalities

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	24	17	24	17
2	30	22	30	22
3	33	26	33	26
4	37	29	37	29
5	40	32	40	33
6	44	36	44	36
7	49	41	49	42
8	54	50	54	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

77

High School End-of-Course Algebra II
Reporting Category 006: Statistical Analysis

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	28	20	28	21
2	33	26	33	26
3	37	30	37	30
4	42	35	43	35
5	47	50	47	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

78

High School End-of-Course US History
Reporting Category 001: History: First Contact to 1789

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	18	10	18	10
2	23	16	23	15
3	27	19	27	19
4	30	22	30	22
5	32	25	32	25
6	35	27	35	27
7	38	30	38	30
8	41	33	41	33
9	46	38	46	38
10	50	50	50	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

79

High School End-of-Course US History
Reporting Category 002: History: 1789-1877

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	21	13	22	14
2	25	18	26	19
3	28	21	29	22
4	31	23	32	24
5	33	26	34	27
6	36	28	37	29
7	38	31	39	32
8	41	34	42	35
9	46	38	47	39
10	50	50	51	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

80

High School End-of-Course US History
Reporting Category 003: History: 1877-1945

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	21	14	21	13
2	26	18	25	18
3	29	21	28	21
4	31	24	30	23
5	33	26	33	25
6	36	28	35	27
7	38	31	37	30
8	41	34	40	33
9	46	38	44	37
10	50	50	48	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

81

High School End-of-Course US History
Reporting Category 004: History: 1945-Present

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	21	13	22	14
2	27	18	27	19
3	30	22	30	22
4	33	25	33	25
5	36	28	36	28
6	38	30	38	30
7	41	33	41	33
8	45	36	45	36
9	50	42	50	42
10	54	50	54	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

82

High School End-of-Course US History
Reporting Category 005: Geography

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	24	16	22	15
2	28	21	27	20
3	32	24	31	23
4	35	27	34	26
5	38	31	37	30
6	43	35	42	34
7	47	50	46	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

83

High School End-of-Course US History
Reporting Category 006: Economics

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	25	17	25	17
2	30	22	30	22
3	34	26	34	26
4	38	30	38	30
5	42	34	42	34
6	47	39	47	39
7	52	50	52	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

84

High School End-of-Course US History
Reporting Category 007: Civics

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	23	16	24	16
2	28	20	29	21
3	31	24	32	25
4	35	27	36	28
5	38	31	39	32
6	43	36	44	37
7	47	50	48	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

85

High School End-of-Course World History TO 1000
Reporting Category 001: Ancient Civilization

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	17	14	17	14
2	22	19	23	20
3	26	23	27	24
4	30	26	31	28
5	33	30	35	32
6	39	35	41	37
7	44	50	46	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

86

High School End-of-Course World History TO 1000
Reporting Category 002: Greece and Rome

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	20	17	20	17
2	24	21	24	21
3	27	24	27	24
4	29	26	30	27
5	32	29	32	29
6	34	31	34	31
7	36	33	36	33
8	38	35	38	35
9	41	38	41	38
10	45	42	46	43
11	49	50	50	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

87

High School End-of-Course World History TO 1000
Reporting Category 003: The Middle East, Russia, and Early

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	21	18	19	16
2	26	23	24	21
3	29	26	28	25
4	32	29	31	28
5	35	32	34	31
6	38	35	37	34
7	41	38	40	37
8	46	43	45	42
9	50	50	49	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

88

High School End-of-Course World History TO 1000
Reporting Category 004: Asia, Africa, and the Americas

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	22	19	21	18
2	27	24	25	22
3	30	27	29	26
4	33	30	32	29
5	36	33	35	31
6	39	36	38	35
7	44	41	43	39
8	48	50	47	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

High School End-of-Course World History TO 1000
Reporting Category 005: History Skills

<u>Raw</u> <u>Score</u>	<u>Core 1</u> <u>Old SS</u>	<u>Core 1</u> <u>New SS</u>	<u>Core 2</u> <u>Old SS</u>	<u>Core 2</u> <u>New SS</u>
0	0	0	0	0
1	21	18	22	18
2	26	22	26	23
3	29	26	29	26
4	31	28	32	29
5	34	31	35	32
6	37	34	38	35
7	42	38	42	39
8	46	50	47	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

90

High School End-of-Course World History TO 1000
Reporting Category 006: Geography Skills

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	21	18	21	18
2	27	23	26	23
3	31	27	30	27
4	35	32	34	31
5	41	37	40	36
6	46	50	45	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

91

High School End-of-Course World History TO 1000
Reporting Category 007: Geography Knowledge and Concepts

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	19	16	20	17
2	24	21	25	22
3	27	24	28	25
4	30	27	31	28
5	32	29	33	30
6	34	31	35	32
7	36	33	37	34
8	38	35	39	36
9	41	38	42	39
10	44	41	45	42
11	49	46	50	47
12	53	50	54	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

92

High School End-of-Course World History FROM 1000
Reporting Category 001: Late Medieval Europe: 1000 AD throu

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	22	16	23	16
2	27	21	28	22
3	31	25	31	25
4	34	28	34	28
5	37	31	38	31
6	41	35	41	35
7	46	40	46	40
8	51	50	51	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

93

High School End-of-Course World History FROM 1000
Reporting Category 002: Age of Discovery: Encountering Cult

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	22	16	21	15
2	27	21	26	20
3	30	24	29	23
4	33	27	32	26
5	36	30	36	30
6	40	34	39	33
7	45	39	44	38
8	49	50	49	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

94

High School End-of-Course World History FROM 1000
Reporting Category 003: 16th-19th Centuries: The Ages of En

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	19	13	20	14
2	24	18	25	19
3	27	21	28	22
4	29	23	30	24
5	31	25	32	26
6	33	27	35	29
7	35	29	37	31
8	38	32	39	33
9	40	34	41	35
10	43	37	44	38
11	48	42	49	43
12	52	50	53	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

95

High School End-of-Course World History FROM 1000
Reporting Category 004: 20th Century: World Conflicts

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	23	17	22	16
2	27	21	27	21
3	30	24	29	24
4	33	27	32	26
5	35	29	34	28
6	37	31	36	30
7	40	34	39	33
8	42	37	42	36
9	47	41	46	40
10	51	50	50	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

High School End-of-Course World History FROM 1000
Reporting Category 005: History Skills

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	23	17	23	17
2	28	22	29	23
3	32	26	33	27
4	36	30	36	30
5	39	34	40	34
6	44	39	44	39
7	49	50	49	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

97

High School End-of-Course World History FROM 1000
Reporting Category 006: Geography Skills

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	26	20	25	19
2	31	25	30	24
3	35	29	34	28
4	39	33	38	32
5	44	38	43	37
6	49	50	47	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

98

High School End-of-Course World History FROM 1000
Reporting Category 007: Geography Knowledge and Concepts

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	22	16	22	16
2	26	20	27	21
3	29	23	29	23
4	31	25	32	26
5	33	27	34	28
6	35	29	36	30
7	37	31	38	32
8	39	33	40	34
9	42	36	42	36
10	44	38	45	39
11	49	43	49	43
12	53	50	53	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

High School End-of-Course Earth science
Reporting Category 001: Scientific Investigation

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	.	.
1	21	17	.	.
2	26	22	.	.
3	29	25	.	.
4	32	28	.	.
5	35	31	.	.
6	38	35	.	.
7	43	39	.	.
8	48	50	.	.

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

100

High School End-of-Course Earth science
Reporting Category 002: Geology

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	.	.
1	6	2	.	.
2	11	7	.	.
3	14	11	.	.
4	17	13	.	.
5	19	15	.	.
6	21	17	.	.
7	22	19	.	.
8	24	20	.	.
9	25	22	.	.
10	27	23	.	.
11	28	25	.	.
12	30	26	.	.
13	31	27	.	.
14	32	29	.	.
15	34	30	.	.
16	35	31	.	.
17	36	33	.	.
18	38	34	.	.
19	40	36	.	.
20	42	38	.	.
21	44	41	.	.
22	47	44	.	.
23	52	49	.	.
24	57	50	.	.

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

101

High School End-of-Course Earth science
Reporting Category 003: Meteorology, Oceanography, and Grou

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	.	.
1	18	14	.	.
2	23	19	.	.
3	26	22	.	.
4	29	25	.	.
5	32	28	.	.
6	34	30	.	.
7	37	33	.	.
8	40	36	.	.
9	45	41	.	.
10	49	50	.	.

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

102

High School End-of-Course Earth science
Reporting Category 004: Astronomy and Space Science

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	.	.
1	21	17	.	.
2	26	22	.	.
3	29	25	.	.
4	33	29	.	.
5	36	32	.	.
6	39	36	.	.
7	45	41	.	.
8	49	50	.	.

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

103

High School End-of-Course Biology
Reporting Category 001: Scientific Investigation

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	14	13	16	15
2	19	18	21	20
3	23	21	25	23
4	26	24	27	26
5	28	27	30	29
6	31	30	32	31
7	34	32	35	34
8	37	35	38	36
9	40	39	41	40
10	45	44	46	45
11	50	50	51	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

104

High School End-of-Course Biology
Reporting Category 002: Life at the Molecular and Cellular

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	15	14	15	13
2	20	19	19	18
3	23	22	22	21
4	26	24	25	23
5	28	26	27	25
6	30	28	29	27
7	32	30	30	29
8	34	32	32	31
9	36	34	34	32
10	38	36	36	35
11	40	39	38	37
12	43	42	41	40
13	48	46	46	45
14	52	50	50	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

105

High School End-of-Course Biology
Reporting Category 003: Life at the Systems and Organism Le

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	15	14	15	14
2	20	19	20	19
3	23	22	23	22
4	26	24	26	24
5	28	27	28	26
6	30	29	30	28
7	32	30	32	30
8	34	32	34	32
9	36	34	35	34
10	38	36	38	36
11	40	39	40	39
12	43	42	43	42
13	48	47	48	46
14	52	50	52	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

106

High School End-of-Course Biology
Reporting Category 004: Interaction of Life Forms

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	16	15	17	16
2	21	19	22	20
3	24	22	25	23
4	27	25	27	26
5	29	27	29	28
6	31	30	32	30
7	33	32	34	32
8	36	34	36	35
9	39	38	39	38
10	44	42	44	42
11	48	50	48	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

107

High School End-of-Course Chemistry
Reporting Category 001: Scientific Investigation

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	16	12	16	12
2	21	17	21	17
3	25	21	25	21
4	28	24	28	24
5	31	27	30	26
6	33	29	33	29
7	36	32	36	32
8	40	36	39	35
9	45	41	44	40
10	49	50	49	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

108

High School End-of-Course Chemistry
Reporting Category 002: Atomic Structure and Periodic Relat

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	26	21	25	20
2	30	26	30	25
3	34	29	33	29
4	36	32	36	31
5	39	34	39	34
6	42	38	42	38
7	47	42	47	42
8	51	50	51	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

109

High School End-of-Course Chemistry
Reporting Category 003: Nomenclature, Chemical Formulas, an

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	14	9	15	11
2	18	14	20	15
3	21	17	23	18
4	24	20	25	21
5	26	22	27	23
6	28	24	29	25
7	30	26	31	26
8	32	27	32	28
9	33	29	34	30
10	35	31	36	32
11	37	33	38	33
12	39	35	40	35
13	42	38	42	38
14	45	41	45	41
15	50	46	50	46
16	54	50	54	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

110

High School End-of-Course Chemistry
Reporting Category 004: Molar Relationships

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	24	19	22	18
2	29	24	27	23
3	32	28	31	26
4	36	31	34	29
5	39	35	37	33
6	43	38	41	36
7	48	43	46	41
8	53	50	50	50

Virginia SOL Assessments - Spring 1998
Reporting Category Scale Score Conversion Table

111

High School End-of-Course Chemistry
Reporting Category 005: Phases of Matter and Kinetic Molecu

Raw Score	Core 1 Old SS	Core 1 New SS	Core 2 Old SS	Core 2 New SS
0	0	0	0	0
1	22	17	22	18
2	27	22	28	23
3	30	26	31	27
4	34	29	35	30
5	37	32	38	34
6	40	36	42	37
7	45	41	47	43
8	50	50	52	50

Virginia SOL Assessments - Spring 1998
 Reporting Category Scale Score Conversion Table

112

Grade 5 Writing

Reporting Category 004: Plan, compose, and revise in a vari

Raw Score	Core 1		Core 1		Core 2		Core 2	
	Prompt 1 Old SS	Prompt 1 New SS	Prompt 2 Old SS	Prompt 2 New SS	Prompt 1 Old SS	Prompt 1 New SS	Prompt 2 Old SS	Prompt 2 New SS
0	0	0	0	0	0	0	0	0
1	6	1	7	1	6	1	6	1
2	7	2	8	2	7	2	7	2
3	8	3	9	3	8	3	8	3
4	9	4	10	5	9	4	9	4
5	10	7	11	9	10	7	10	7
6	14	12	15	13	14	11	14	12
7	17	14	18	15	17	14	17	15
8	19	17	20	17	19	16	20	17
9	21	18	22	19	21	18	22	19
10	22	20	23	21	22	20	23	21
11	24	21	24	22	24	21	25	22
12	25	23	26	23	25	22	26	23
13	26	24	27	25	26	24	27	25
14	27	25	28	26	27	25	28	26
15	29	26	29	27	28	26	30	27
16	30	27	31	28	30	27	31	28
17	31	29	32	29	31	28	32	30
18	32	30	33	31	32	30	34	31
19	34	31	35	32	33	31	35	33
20	35	33	36	34	35	33	37	34
21	37	34	38	36	37	34	39	36
22	39	36	40	38	39	36	41	39
23	41	39	42	40	41	39	43	41
24	44	42	45	43	44	41	46	44
25	48	46	49	47	48	46	51	48
26	52	50	53	50	52	50	54	50

Virginia SOL Assessments - Spring 1998
 Reporting Category Scale Score Conversion Table

113

Grade 5 Writing

Reporting Category 005: Edit for correct use of language, c

Raw Score	Core 1	Core 1	Core 1	Core 1	Core 2	Core 2	Core 2	Core 2
	Prompt 1 Old SS	Prompt 1 New SS	Prompt 2 Old SS	Prompt 2 New SS	Prompt 1 Old SS	Prompt 1 New SS	Prompt 2 Old SS	Prompt 2 New SS
0	0	0	0	0	0	0	0	0
1	8	3	9	3	9	3	7	3
2	9	5	10	6	10	5	9	5
3	11	9	12	9	11	9	11	9
4	15	13	16	13	16	13	15	13
5	18	16	18	16	18	16	18	16
6	20	18	20	18	21	18	20	18
7	22	20	22	20	22	20	22	20
8	24	21	24	22	24	22	24	22
9	25	23	26	23	26	23	25	23
10	27	24	27	25	27	25	27	25
11	28	26	29	26	29	26	29	26
12	30	28	30	28	30	28	30	28
13	32	29	32	29	32	30	32	29
14	33	31	34	31	34	31	34	31
15	36	33	36	33	36	34	36	33
16	38	36	38	36	39	36	38	36
17	42	40	42	40	43	40	43	40
18	46	50	46	50	46	50	46	50

Virginia SOL Assessments - Spring 1998
 Reporting Category Scale Score Conversion Table

Grade 8 Writing

Reporting Category 003: Plan, compose, and revise in a vari

Raw Score	Core 1		Core 1		Core 2		Core 2	
	Prompt 1 Old SS	Prompt 1 New SS	Prompt 2 Old SS	Prompt 2 New SS	Prompt 1 Old SS	Prompt 1 New SS	Prompt 2 Old SS	Prompt 2 New SS
0	0	0	0	0	0	0	0	0
1	3	1	4	1	4	1	4	1
2	4	2	5	2	5	2	5	2
3	5	3	6	3	6	3	6	3
4	6	4	7	4	7	4	7	4
5	7	5	8	5	8	6	8	6
6	12	9	12	10	13	10	13	10
7	15	12	15	13	15	13	15	13
8	17	15	18	15	17	15	17	15
9	19	17	20	17	19	17	19	17
10	21	18	21	19	21	18	21	18
11	23	20	23	21	22	20	22	20
12	24	22	24	22	24	21	24	21
13	26	23	26	23	25	23	25	23
14	27	25	27	25	26	24	26	24
15	28	26	29	26	28	25	28	25
16	30	27	30	28	29	27	29	27
17	31	29	31	29	31	28	31	28
18	33	30	33	31	32	30	32	30
19	34	32	35	32	34	31	34	32
20	36	34	36	34	36	33	36	33
21	38	36	38	36	38	35	38	36
22	40	38	41	38	40	38	41	38
23	43	41	43	41	43	41	43	41
24	46	44	47	44	47	44	47	44
25	51	48	51	49	51	49	51	49
26	55	50	55	50	56	50	56	50

Virginia SOL Assessments - Spring 1998
 Reporting Category Scale Score Conversion Table

115

Grade 8 Writing

Reporting Category 004: Edit for correct use of language, c

Raw Score	Core 1	Core 1	Core 1	Core 1	Core 2	Core 2	Core 2	Core 2
	Prompt 1 Old SS	Prompt 1 New SS	Prompt 2 Old SS	Prompt 2 New SS	Prompt 1 Old SS	Prompt 1 New SS	Prompt 2 Old SS	Prompt 2 New SS
0	0	0	0	0	0	0	0	0
1	8	3	8	2	8	3	7	2
2	9	5	9	4	9	5	8	4
3	11	9	11	9	11	9	10	8
4	16	13	16	13	16	14	15	13
5	19	17	19	17	19	17	19	17
6	21	19	21	19	22	19	22	19
7	23	21	23	21	24	22	24	21
8	25	23	25	23	26	23	26	23
9	27	25	27	25	28	25	28	25
10	29	27	29	27	29	27	29	27
11	31	28	31	28	31	29	31	29
12	32	30	33	30	33	31	33	31
13	34	32	34	32	35	33	35	33
14	37	34	37	34	37	35	37	35
15	39	37	39	37	39	37	40	37
16	42	40	42	40	43	40	43	40
17	47	45	47	45	47	45	47	45
18	51	50	51	50	51	50	52	50

Virginia SOL Assessments - Spring 1998
 Reporting Category Scale Score Conversion Table

116

High School End-of-Course Writing
 Reporting Category 001: Plan, compose, and revise in a vari

Raw Score	Core 1	Core 1	Core 1	Core 1	Core 2	Core 2	Core 2	Core 2
	Prompt 1 Old SS	Prompt 1 New SS	Prompt 2 Old SS	Prompt 2 New SS	Prompt 1 Old SS	Prompt 1 New SS	Prompt 2 Old SS	Prompt 2 New SS
0	0	0	0	0	0	0	0	0
1	6	1	6	1	5	1	5	2
2	7	2	7	2	6	2	6	3
3	8	3	8	3	7	4	7	5
4	9	4	9	4	8	5	8	6
5	10	8	10	8	9	7	10	8
6	13	11	14	12	13	11	14	12
7	15	13	16	14	15	13	16	14
8	17	15	17	16	17	15	17	16
9	18	17	19	17	18	16	19	17
10	20	18	20	18	19	18	20	18
11	21	19	21	19	21	19	21	19
12	22	20	22	20	22	20	22	20
13	23	21	23	21	23	21	23	21
14	24	22	24	22	24	22	24	22
15	25	23	25	23	24	23	25	23
16	26	24	26	24	25	24	26	24
17	27	25	27	25	26	24	27	25
18	28	26	28	26	27	25	28	26
19	29	27	29	27	28	26	29	27
20	30	28	30	28	29	27	30	28
21	31	29	31	29	30	28	31	29
22	32	30	32	30	31	29	32	30
23	33	31	33	31	32	31	33	31
24	34	32	34	32	34	32	34	32
25	36	34	35	33	35	33	35	33
26	37	35	36	35	37	35	37	35
27	39	37	38	36	39	37	39	37
28	41	39	40	38	41	39	41	39
29	44	42	42	40	43	41	43	42
30	47	45	45	43	46	45	47	45
31	52	48	49	47	51	49	54	48
32	56	50	52	50	55	50	60	50

Virginia SOL Assessments - Spring 1998
 Reporting Category Scale Score Conversion Table

117

High School End-of-Course Writing
 Reporting Category 002: Edit for correct use of language, c

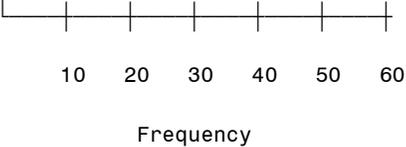
Raw Score	Core 1		Core 1		Core 2		Core 2	
	Prompt 1 Old SS	Prompt 1 New SS	Prompt 2 Old SS	Prompt 2 New SS	Prompt 1 Old SS	Prompt 1 New SS	Prompt 2 Old SS	Prompt 2 New SS
0	0	0	0	0	0	0	0	0
1	8	3	8	3	6	2	7	2
2	9	5	9	5	7	4	8	4
3	11	9	10	9	9	8	10	8
4	15	13	15	13	13	12	14	12
5	17	16	17	16	16	14	17	15
6	19	18	19	18	18	17	19	17
7	21	19	21	19	20	18	20	19
8	23	21	22	21	22	20	22	20
9	24	22	24	22	23	21	23	22
10	25	24	25	24	25	23	25	23
11	27	25	26	25	26	24	26	24
12	28	26	28	26	27	26	27	25
13	29	28	29	27	29	27	28	27
14	31	29	30	29	30	28	30	28
15	32	30	32	30	31	30	31	29
16	34	32	33	31	33	31	32	31
17	35	33	35	33	34	33	34	32
18	37	35	36	35	36	35	36	34
19	39	37	38	37	38	37	38	36
20	42	40	41	39	41	40	41	39
21	46	44	45	44	45	44	45	43
22	50	50	49	50	49	50	49	50

APPENDIX B

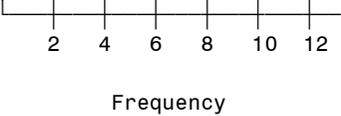
SOL Scale Score Frequency Distributions and Histograms

SS English: Reading/Lit. & Res.

		Freq	Cum. Freq	Percent	Cum. Percent
99	F	1	1	0.10	0.10
148	F	1	2	0.10	0.21
233	F	2	4	0.21	0.41
246	FF	3	7	0.31	0.73
258	FF	4	11	0.41	1.14
269	FFF	5	16	0.52	1.66
278	FFF	5	21	0.52	2.18
281	F	1	22	0.10	2.28
288	FFFFFF	12	34	1.24	3.53
296	FFFF	8	42	0.83	4.36
305	FFFFFF	11	53	1.14	5.50
312	FFFFFFF	17	70	1.76	7.26
320	FFFFFFFF	21	91	2.18	9.44
327	FFFFF	11	102	1.14	10.58
334	FFFFFFF	18	120	1.87	12.45
341	FFFFFFFF	23	143	2.39	14.83
348	FFFFFFF	17	160	1.76	16.60
355	FFFFFFFFFFFF	30	190	3.11	19.71
362	FFFFFFFFF	22	212	2.28	21.99
369	FFFFFFFFF	24	236	2.49	24.48
376	FFFFFFFFFFFF	33	269	3.42	27.90
382	FFFFFFFFFFFFF	45	314	4.67	32.57
389	FFFFFFFFFFFFF	31	345	3.22	35.79
396	FFFFFFFFFFFFF	40	385	4.15	39.94
403	PPPPPPPPPPPPPPPP	38	423	3.94	43.88
411	PPPPPPPPPPPPPPPP	43	466	4.46	48.34
419	PPPPPPPPPPPPPPPP	45	511	4.67	53.01
426	PPPPPPPPPPPPPPPP	57	568	5.91	58.92
435	PPPPPPPPPPPPPPPP	46	614	4.77	63.69
444	PPPPPPPPPPPPPPPP	60	674	6.22	69.92
453	PPPPPPPPPPPPPPPP	44	718	4.56	74.48
463	PPPPPPPPPPPPPPPP	57	775	5.91	80.39
474	PPPPPPPPPPPPPPPP	38	813	3.94	84.34
487	PPPPPPPPPPPPPPPP	39	852	4.05	88.38
500	AAAAAAAAAAAAAAAA	41	893	4.25	92.63
517	AAAAAAAAA	21	914	2.18	94.81
538	AAAAAAAAA	24	938	2.49	97.30
566	AAAAA	15	953	1.56	98.86
594	AAAA	7	960	0.73	99.59
600	AA	4	964	0.41	100.00

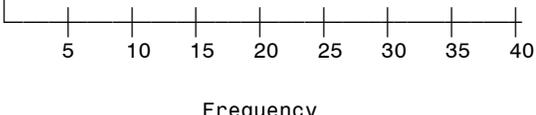


SS English: Reading/Lit. & Res.		Cum.	Cum.		
		Freq	Freq	Percent	Percent
227	FF	1	1	0.59	0.59
240	FF	1	2	0.59	1.18
251	FF	1	3	0.59	1.78
262	FFFF	2	5	1.18	2.96
281	FFFF	2	7	1.18	4.14
290	FFFFFFF	4	11	2.37	6.51
297	FFFFFFFFF	6	17	3.55	10.06
306	FFFFFFF	4	21	2.37	12.43
313	FF	1	22	0.59	13.02
321	FFFF	2	24	1.18	14.20
328	FFFF	2	26	1.18	15.38
335	FFFF	2	28	1.18	16.57
342	FF	1	29	0.59	17.16
349	FF	1	30	0.59	17.75
356	FFFFF	3	33	1.78	19.53
363	FFFFF	3	36	1.78	21.30
371	FFFFFFFFF	6	42	3.55	24.85
378	FFFFF	3	45	1.78	26.63
385	FFFFF	3	48	1.78	28.40
392	FFFFFFFFFFFFFFF	10	58	5.92	34.32
400	PPPPPPPP	5	63	2.96	37.28
407	PPPPPPPP	5	68	2.96	40.24
415	PPPPPPPPPPPP	8	76	4.73	44.97
424	PPPPPPPP	5	81	2.96	47.93
432	PPPPPPPPPPPPPPPPPPPP	13	94	7.69	55.62
441	PPPPPPPPPPPPPPPPPP	10	104	5.92	61.54
451	PPPPPPPPPPPPPPPPPPPP	13	117	7.69	69.23
462	PPPPPPPPPPPPPPPP	9	126	5.33	74.56
473	PPPPPPPPPPPPPPPP	8	134	4.73	79.29
486	PPPPPPPPPPPPPPPPPP	11	145	6.51	85.80
500	AAAAAAAAAAAA	7	152	4.14	89.94
517	AAAAAAAAAAAA	7	159	4.14	94.08
538	AAAAAAAAAAAA	7	166	4.14	98.22
567	AAAA	2	168	1.18	99.41
596	AA	1	169	0.59	100.00



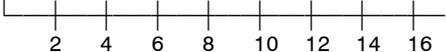
SS Mathematics

		Freq	Cum. Freq	Percent	Cum. Percent
158	FF	2	2	0.22	0.22
194	F	1	3	0.11	0.33
255	F	1	4	0.11	0.44
286	F	1	5	0.11	0.55
292	FF	2	7	0.22	0.77
298	FF	2	9	0.22	0.99
304	FFFF	4	13	0.44	1.43
309	FFFFFF	6	19	0.66	2.09
314	FFFFFFF	6	25	0.66	2.75
319	FFFFF	5	30	0.55	3.30
323	FFFFFFFFFFFF	14	44	1.54	4.84
324	F	1	45	0.11	4.95
327	FFFFFFFFFFFF	12	57	1.32	6.27
332	FFFFFFFFFFFFFF	17	74	1.87	8.14
336	FFFFFFFFFFFFFFFF	24	98	2.64	10.78
337	F	1	99	0.11	10.89
340	FFFFFFFFFFFFFFFF	18	117	1.98	12.87
344	FFFFFFFFFFFFFFFF	17	134	1.87	14.74
345	FF	2	136	0.22	14.96
348	FFFFFFFFFFFF	14	150	1.54	16.50
352	FFFFFFFFFFFFFFFF	29	179	3.19	19.69
356	FFFFFFFFFFFFFF	22	201	2.42	22.11
359	FFFFFFFFFFFFFF	24	225	2.64	24.75
363	FFFFFFFFFFFFFFFF	37	262	4.07	28.82
367	FFFFFFFFFFFFFFFF	29	291	3.19	32.01
371	FFFFFFFFFFFFFFFF	32	323	3.52	35.53
374	FFFFFFFFFFFFFFFF	31	354	3.41	38.94
378	FFFFFFFFFFFFFFFF	30	384	3.30	42.24
382	FFFFFFFFFFFFFFFF	36	420	3.96	46.20
386	FFFFFFFFFFFFFFFF	40	460	4.40	50.61
389	FFFFFFFFFFFFFFFF	32	492	3.52	54.13
393	FFFFFFFFFFFFFFFF	30	522	3.30	57.43
397	FFFFFFFFFFFFFFFF	26	548	2.86	60.29
401	PPPPPPPPPPPPPPPPPPPPPPPPPPPP	30	578	3.30	63.59
404	PPPPPPPPPPPPPPPPPPPPPPPPPPPP	26	604	2.86	66.45
408	PPPPPPPPPPPPPPPPPP	19	623	2.09	68.54
412	PPPPPPPPPPPPPPPPPPPPPPPPPPPP	22	645	2.42	70.96
416	PPPPPPPPPPPPPPPPPPPPPPPPPPPP	28	673	3.08	74.04
421	PPPPPPPPPPPPPPPPPPPPPPPPPPPP	23	696	2.53	76.57
425	PPPPPPPPPPPPPPPPPPPPPPPPPPPP	25	721	2.75	79.32
429	PPPPPPPPPPPPPPPPPPPPPPPPPPPP	20	741	2.20	81.52
434	PPPPPPPPPPPPPPPPPP	16	757	1.76	83.28
439	PPPPPPPPPPPPPPPPPPPPPPPPPPPP	18	775	1.98	85.26
444	PPPPPPPPPPPPPPPPPPPPPPPPPPPP	20	795	2.20	87.46
449	PPPPPPPPPPPPPPPPPPPPPPPPPPPP	21	816	2.31	89.77
455	PPPPPPPPPPPPPPPPPPPPPPPPPPPP	17	833	1.87	91.64
461	PPPPPPPPPPPPPPPPPPPPPPPPPPPP	20	853	2.20	93.84
467	PPPPPPPPPPPP	11	864	1.21	95.05
474	PPPPPPPPPPPPPPPPPPPPPPPPPPPP	16	880	1.76	96.81
482	PPPPPP	6	886	0.66	97.47
491	PPPPPPPP	8	894	0.88	98.35
501	AAAAAA	6	900	0.66	99.01
513	AAAA	4	904	0.44	99.45
528	AAAAA	5	909	0.55	100.00



SS Mathematics

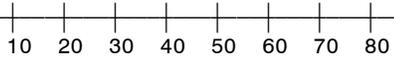
		Freq	Cum. Freq	Percent	Cum. Percent
300	FF	1	1	0.34	0.34
310	FF	1	2	0.34	0.68
315	FFFFFF	3	5	1.01	1.69
324	FFFFFF	3	8	1.01	2.70
329	FFFFFFFF	5	13	1.69	4.39
332	FF	1	14	0.34	4.73
333	FF	1	15	0.34	5.07
337	FFFF	2	17	0.68	5.74
341	FFFFFF	4	21	1.35	7.09
345	FFFFFFFF	5	26	1.69	8.78
349	FFFFFF	4	30	1.35	10.14
352	FFFFFF	4	34	1.35	11.49
356	FFFFFFFFFFFF	7	41	2.36	13.85
360	FFFF	3	44	1.01	14.86
364	FFFF	3	47	1.01	15.88
367	FFFFFFFFFFFFFFFF	11	58	3.72	19.59
371	FFFF	3	61	1.01	20.61
375	FFFFFFFF	6	67	2.03	22.64
378	FFFFFFFF	6	73	2.03	24.66
382	FFFFFFFFFFFFFFFF	9	82	3.04	27.70
385	FFFFFFFFFFFFFFFF	8	90	2.70	30.41
389	FFFFFFFFFFFFFFFF	7	97	2.36	32.77
393	FFFFFFFFFFFFFFFF	11	108	3.72	36.49
397	FFFFFFFFFFFFFFFF	7	115	2.36	38.85
400	PPPPPPPPPPPPPPPP	9	124	3.04	41.89
404	PPPPPPPPPPPPPPPPPP	11	135	3.72	45.61
408	PPPPPPPPPPPPPPPPPPPP	13	148	4.39	50.00
412	PPPPPPPPPPPPPPPPPP	10	158	3.38	53.38
416	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	17	175	5.74	59.12
420	PPPPPPPPPPPPPPPPPPPPPPPPPP	13	188	4.39	63.51
424	PPPPPPPPPPPPPPPPPPPP	10	198	3.38	66.89
429	PPPPPPPPPPPPPPPPPPPP	10	208	3.38	70.27
433	PPPPPPPPPPPP	6	214	2.03	72.30
438	PPPPPPPPPPPP	6	220	2.03	74.32
443	PPPPPPPPPPPPPPPPPPPPPPPPPP	12	232	4.05	78.38
448	PPPPPPPPPPPPPPPPPPPPPPPP	11	243	3.72	82.09
454	PPPPPPPPPPPPPPPPPPPPPPPP	11	254	3.72	85.81
460	PPPPPPPPPPPP	6	260	2.03	87.84
466	PPPPPPPPPPPPPPPP	8	268	2.70	90.54
473	PPPPPPPPPPPPPP	7	275	2.36	92.91
481	PPPPPPPPPPPP	6	281	2.03	94.93
490	PPPP	2	283	0.68	95.61
500	AAAAAA	3	286	1.01	96.62
512	AAAAAAAAAA	5	291	1.69	98.31
527	AAAAAA	3	294	1.01	99.32
548	AAAA	2	296	0.68	100.00



Frequency

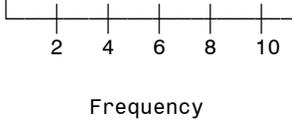
SS History/Social Science

		Freq	Cum. Freq	Percent	Cum. Percent
212		1	1	0.07	0.07
225		1	2	0.07	0.14
236		1	3	0.07	0.21
246		1	4	0.07	0.27
255	FF	6	10	0.41	0.69
263	FF	5	15	0.34	1.03
272	FFF	8	23	0.55	1.58
277		1	24	0.07	1.65
279	FFFF	10	34	0.69	2.34
286	FFFFFFF	19	53	1.31	3.64
293	FFFFFFFFF	27	80	1.86	5.50
299	FFFFFFFFFFFFFF	43	123	2.96	8.45
305	FFFFFFFFFFFFFF	33	156	2.27	10.72
311	FFFFFFFFFFFFFFF	47	203	3.23	13.95
317	FFFFFFFFFFFFFFF	37	240	2.54	16.49
322	FFFFFFFFFFFFFFF	39	279	2.68	19.18
328	FFFFFFFFFFFFFFFF	58	337	3.99	23.16
334	FFFFFFFFFFFFFFFF	58	395	3.99	27.15
339	FFFFFFFFFFFFFFFF	65	460	4.47	31.62
345	FFFFFFFFFFFFFFFF	63	523	4.33	35.95
349		1	524	0.07	36.01
350	FFFFFFFFFFFFFFFF	51	575	3.51	39.52
355	FFFFFFFFFFFFFFFF	71	646	4.88	44.40
360	FFFFFFFFFFFFFFFF	60	706	4.12	48.52
366	FFFFFFFFFFFFFFFF	84	790	5.77	54.30
372	FFFFFFFFFFFFFFFF	66	856	4.54	58.83
377	FFFFFFFFFFFFFFFF	65	921	4.47	63.30
383	FFFFFFFFFFFFFFFF	72	993	4.95	68.25
388	FFFFFFFFFFFFFFFF	47	1040	3.23	71.48
394	FFFFFFFFFFFFFFFF	75	1115	5.15	76.63
400	PPPPPPPPPPPPPPPPPP	52	1167	3.57	80.21
405	PPPPPPPPPPPPPPPPPP	52	1219	3.57	83.78
412	PPPPPPPPPPPPPP	36	1255	2.47	86.25
418	PPPPPPPPPPPPPP	38	1293	2.61	88.87
425	PPPPPPPPPPPPPP	36	1329	2.47	91.34
432	PPPPPPPPPPPP	28	1357	1.92	93.26
439	PPPPPPPPPPPP	29	1386	1.99	95.26
447	PPPPPPPPPP	26	1412	1.79	97.04
455	PPPPPP	18	1430	1.24	98.28
465	PPPP	11	1441	0.76	99.04
475	PP	5	1446	0.34	99.38
486	PP	4	1450	0.27	99.66
498		1	1451	0.07	99.73
513	A	2	1453	0.14	99.86
532	A	2	1455	0.14	100.00



Frequency

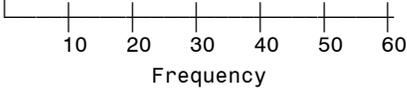
SS History/Social Science		Cum.	Cum.		
		Freq	Freq	Percent	Percent
253	FF	1	1	0.58	0.58
269	FFFFFF	3	4	1.74	2.33
277	FFFFFFFF	5	9	2.91	5.23
284	FFFFFFF	4	13	2.33	7.56
290	FFFFF	3	16	1.74	9.30
296	FFFFFFFF	5	21	2.91	12.21
303	FFFFFFFFF	6	27	3.49	15.70
309	FFFFFFFFF	7	34	4.07	19.77
315	FFFFFFFFFFFFFFFF	11	45	6.40	26.16
321	FFFFFFF	4	49	2.33	28.49
327	FFFFFFF	4	53	2.33	30.81
332	FFFFFFFFF	6	59	3.49	34.30
338	FFFFFFFFFFFFFFFF	11	70	6.40	40.70
343	FFFFFFFFFFFFFFFF	9	79	5.23	45.93
349	FFFFFFF	5	84	2.91	48.84
354	FFFFF	3	87	1.74	50.58
360	FFFFFFFFFFFFFFFF	8	95	4.65	55.23
365	FFFFFFFFFFFFFFFF	9	104	5.23	60.47
371	FFFFFFFFFFFFFFFF	7	111	4.07	64.53
377	FFFFFFFFFFFFFFFF	9	120	5.23	69.77
382	FFFFFFFFFFFFFFFF	11	131	6.40	76.16
388	FFFFFFFFFFFFFFFF	7	138	4.07	80.23
394	FFFFFFFFFFFFFFFF	9	147	5.23	85.47
400	PPPPPPPPPP	6	153	3.49	88.95
406	PPPPPPPPPP	5	158	2.91	91.86
412	PP	1	159	0.58	92.44
419	PP	1	160	0.58	93.02
426	PP	1	161	0.58	93.60
433	PP	1	162	0.58	94.19
440	PPPPPPPP	4	166	2.33	96.51
448	PP	1	167	0.58	97.09
487	PPPPP	3	170	1.74	98.84
535	AAAA	2	172	1.16	100.00



Grade 8 : Science - Core 1

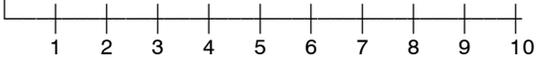
Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

SS Science		Freq	Cum. Freq	Percent	Cum. Percent
213	F	1	1	0.09	0.09
235	F	1	2	0.09	0.19
307	F	1	3	0.09	0.28
314	F	1	4	0.09	0.38
320	F	2	6	0.19	0.56
326	FF	3	9	0.28	0.85
331	FF	4	13	0.38	1.22
337	FFFFF	10	23	0.94	2.17
342	FF	4	27	0.38	2.54
347	FFFFFFF	13	40	1.22	3.77
352	FFFFFFFFF	21	61	1.98	5.74
356	FFFFFFFFF	18	79	1.69	7.44
361	FFFFFFFFFFFFFFF	35	114	3.30	10.73
366	FFFFFFFFFFFFFFF	26	140	2.45	13.18
370	FFFFFFFFFFFFFFF	22	162	2.07	15.25
374	F	1	163	0.09	15.35
375	FFFFFFFFFFFFFFF	32	195	3.01	18.36
379	FFFFFFFFFFFFFFF	36	231	3.39	21.75
384	FFFFFFFFFFFFFFF	37	268	3.48	25.24
388	FFFFFFFFFFFFFFF	35	303	3.30	28.53
393	FFFFFFFFFFFFFFF	42	345	3.95	32.49
397	FFFFFFFFFFFFFFF	52	397	4.90	37.38
401	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	59	456	5.56	42.94
406	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	51	507	4.80	47.74
411	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	55	562	5.18	52.92
416	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	59	621	5.56	58.47
420	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	53	674	4.99	63.47
425	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	40	714	3.77	67.23
430	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	42	756	3.95	71.19
436	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	48	804	4.52	75.71
441	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	34	838	3.20	78.91
447	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	36	874	3.39	82.30
453	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	35	909	3.30	85.59
459	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	34	943	3.20	88.79
466	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	33	976	3.11	91.90
474	PPPPPPPPPP	18	994	1.69	93.60
482	PPPPPPPPPP	19	1013	1.79	95.39
492	PPPPPPPPPP	15	1028	1.41	96.80
502	AAAAAA	12	1040	1.13	97.93
515	AAAAA	9	1049	0.85	98.78
530	AAAA	8	1057	0.75	99.53
552	AA	4	1061	0.38	99.91
600	A	1	1062	0.09	100.00



SS Science

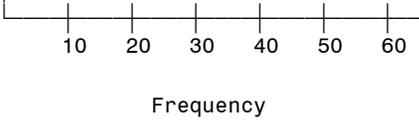
		Cum. Freq	Cum. Percent		Cum. Percent
320	FFFF	1	1	0.69	0.69
341	FFFF	1	2	0.69	1.39
346	FFFF	1	3	0.69	2.08
360	FFFFFFF	2	5	1.39	3.47
365	FFFFFFF	2	7	1.39	4.86
369	FFFFFFFFFFFFFF	4	11	2.78	7.64
374	FFFFFFF	2	13	1.39	9.03
378	FFFFFFFFFFFFFF	4	17	2.78	11.81
382	FFFFFFFFFFFFFF	3	20	2.08	13.89
387	FFFFFFF	2	22	1.39	15.28
391	FFFFFFFFFFFFFF	4	26	2.78	18.06
396	FFFFFFF	2	28	1.39	19.44
400	PPPPPPPPPP	3	31	2.08	21.53
405	PPPPPPPPPPPPPPPPPPPPPPPP	7	38	4.86	26.39
409	PPPPPPPPPPPPPPPPPPPPPP	6	44	4.17	30.56
414	PPPPPPPPPP	3	47	2.08	32.64
419	PPPPPPPPPPPPPPPPPPPPPP	6	53	4.17	36.81
424	PPPPPPPPPPPPPPPPPPPPPPPPPP	8	61	5.56	42.36
429	PPPPPPPPPPPPPPPPPPPPPPPP	7	68	4.86	47.22
434	PPPPPPPPPPPPPPPPPPPPPPPPPPPP	9	77	6.25	53.47
440	PPPPPPPPPPPPPPPPPPPPPP	6	83	4.17	57.64
445	PPPPPPPPPPPPPPPPPPPPPPPPPP	9	92	6.25	63.89
451	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	10	102	6.94	70.83
458	PPPPPPPPPPPPPPPPPPPPPP	6	108	4.17	75.00
465	PPPPPPPPPPPPPPPPPPPPPP	6	114	4.17	79.17
472	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	9	123	6.25	85.42
480	PPPPPPPPPPPPPPPPPPPPPPPP	7	130	4.86	90.28
489	PPPPPPPPPPPPPPPPPP	5	135	3.47	93.75
500	AAAAAAAAAAAAAAAAAAAA	5	140	3.47	97.22
512	AAAA	1	141	0.69	97.92
528	AAAA	1	142	0.69	98.61
550	AAAA	1	143	0.69	99.31
600	AAAA	1	144	0.69	100.00



Frequency

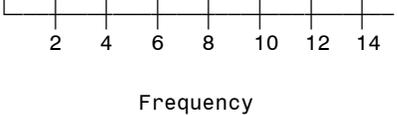
SS Computer/Technology

		Freq	Cum. Freq	Percent	Cum. Percent
144	F	2	2	0.24	0.24
185	F	1	3	0.12	0.37
243	F	1	4	0.12	0.49
255	F	2	6	0.24	0.73
266	F	2	8	0.24	0.98
286	F	1	9	0.12	1.10
295	F	2	11	0.24	1.35
302	FFFF	7	18	0.86	2.20
310	F	1	19	0.12	2.33
318	FFF	5	24	0.61	2.94
325	FFFFF	10	34	1.22	4.16
332	FFF	5	39	0.61	4.77
338	FFFFF	10	49	1.22	6.00
346	FFFFFFF	14	63	1.71	7.71
352	FFFFFFF	11	74	1.35	9.06
359	FFFFFFF	16	90	1.96	11.02
365	FFFFFFF	15	105	1.84	12.85
372	FFFFFFFFF	23	128	2.82	15.67
379	FFFFFFFFF	26	154	3.18	18.85
385	FFFFFFFFF	27	181	3.30	22.15
392	FFFFFFFFF	30	211	3.67	25.83
399	FFFFFFFFF	41	252	5.02	30.84
406	PPPPPPPPPPPPPPPPPPPPPPPP	48	300	5.88	36.72
414	PPPPPPPPPPPPPPPPPPPPPPPP	47	347	5.75	42.47
421	PPPPPPPPPPPPPPPPPPPPPPPP	59	406	7.22	49.69
429	PPPPPPPPPPPPPPPPPPPPPPPP	58	464	7.10	56.79
437	PPPPPPPPPPPPPPPPPPPPPPPP	64	528	7.83	64.63
446	PPPPPPPPPPPPPPPPPPPPPPPP	51	579	6.24	70.87
455	PPPPPPPPPPPPPPPPPPPPPPPP	47	626	5.75	76.62
466	PPPPPPPPPPPPPPPPPPPPPPPP	60	686	7.34	83.97
477	PPPPPPPPPPPPPPPPPPPPPPPP	49	735	6.00	89.96
490	PPPPPPPPPPPPPP	30	765	3.67	93.64
505	AAAAAAAAAAAA	25	790	3.06	96.70
524	AAAAAAAA	17	807	2.08	98.78
549	AAAA	8	815	0.98	99.76
590	A	2	817	0.24	100.00

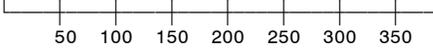


SS Computer/Technology

		Cum. Freq	Cum. Freq	Percent	Percent
268	FF	1	1	0.58	0.58
286	FF	1	2	0.58	1.16
294	FFFFFF	3	5	1.74	2.91
302	FF	1	6	0.58	3.49
310	FFFF	2	8	1.16	4.65
317	FF	1	9	0.58	5.23
331	FFFFFF	3	12	1.74	6.98
338	FFFF	2	14	1.16	8.14
345	FFFFFFFFFF	5	19	2.91	11.05
352	FFFFFFFF	4	23	2.33	13.37
358	FFFFFFFF	4	27	2.33	15.70
365	FFFFFFFFFFFF	6	33	3.49	19.19
372	FFFFFF	3	36	1.74	20.93
379	FFFFFFFFFFFFFFFFFFFFFFFF	12	48	6.98	27.91
386	FFFFFF	3	51	1.74	29.65
393	FFFFFFFFFFFFFFFFFFFFFFFF	11	62	6.40	36.05
400	PPPPPPPPPPPPPPPPPPPPPPPP	14	76	8.14	44.19
408	PPPPPPPPPPPPPPPPPPPP	10	86	5.81	50.00
415	PPPPPPPPPPPPPPPPPPPPPPPP	15	101	8.72	58.72
423	PPPPPPPPPPPPPPPPPPPPPP	12	113	6.98	65.70
432	PPPPPPPPPPPPPPPPPPPP	10	123	5.81	71.51
441	PPPPPPPPPPPPPPPPPPPP	10	133	5.81	77.33
450	PPPPPPPPPPPP	7	140	4.07	81.40
460	PPPPPPPPPPPP	7	147	4.07	85.47
472	PPPPPPPPPP	5	152	2.91	88.37
485	PPPPPPPPPPPPPPPPPPPP	10	162	5.81	94.19
500	AAAAAAAAAAAA	6	168	3.49	97.67
519	AA	1	169	0.58	98.26
543	AAAAAA	3	172	1.74	100.00

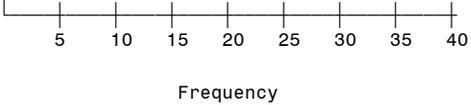


Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
201		1	1	0.01	0.01
225	F	5	6	0.06	0.08
243		2	8	0.03	0.10
258	F	7	15	0.09	0.19
271	FF	15	30	0.19	0.38
282	FFF	30	60	0.38	0.75
292	FFFFFF	56	116	0.70	1.45
301	FFFFFFF	71	187	0.89	2.34
310	FFFFFFFFF	96	283	1.20	3.54
318	FFFFFFFF	99	382	1.24	4.78
325	FFFFFFFFF	132	514	1.65	6.44
332	FFFFFFFFF	150	664	1.88	8.32
339	FFFFFFFFF	168	832	2.10	10.42
346	FFFFFFFFF	185	1017	2.32	12.74
352	FFFFFFFFF	207	1224	2.59	15.33
359	FFFFFFFFF	236	1460	2.96	18.29
365	FFFFFFFFF	222	1682	2.78	21.07
371	FFFFFFFFF	241	1923	3.02	24.09
377	FFFFFFFFF	273	2196	3.42	27.51
383	FFFFFFFFF	281	2477	3.52	31.02
389	FFFFFFFFF	266	2743	3.33	34.36
395	FFFFFFFFF	292	3035	3.66	38.01
401	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	324	3359	4.06	42.07
407	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	343	3702	4.30	46.37
413	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	358	4060	4.48	50.85
419	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	360	4420	4.51	55.36
426	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	327	4747	4.10	59.46
432	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	384	5131	4.81	64.27
439	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	325	5456	4.07	68.34
446	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	350	5806	4.38	72.72
453	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	332	6138	4.16	76.88
461	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	324	6462	4.06	80.94
470	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	327	6789	4.10	85.03
480	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	275	7064	3.44	88.48
490	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	288	7352	3.61	92.08
502	AAAAAAAAAAAAAAAAAAAAAAAAAAAA	261	7613	3.27	95.35
516	AAAAAAAAAAAAAAAAAAAAAAAAAAAA	191	7804	2.39	97.75
533	AAAAAAAAAAAA	107	7911	1.34	99.09
557	AAAAAA	59	7970	0.74	99.82
596	A	14	7984	0.18	100.00

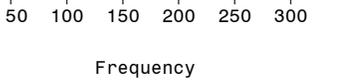


Frequency

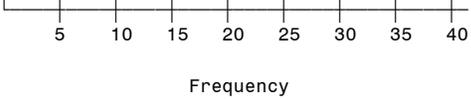
Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
285	F	1	1	0.15	0.15
295	F	1	2	0.15	0.30
305	FF	2	4	0.30	0.60
313	FFF	3	7	0.45	1.06
321	FFFF	4	11	0.60	1.66
329	FFFF	4	15	0.60	2.27
336	FFFFF	5	20	0.76	3.02
343	FFFFFFFF	12	32	1.81	4.83
349	FFFFFFFF	10	42	1.51	6.34
355	FFFFFFFFFFFF	16	58	2.42	8.76
362	FFFFFFFFFFFFFF	20	78	3.02	11.78
368	FFFFFFFFFFFF	12	90	1.81	13.60
374	FFFFFFFFFFFF	11	101	1.66	15.26
379	FFFFFFFFFFFFFFFF	26	127	3.93	19.18
385	FFFFFFFFFFFFFF	18	145	2.72	21.90
391	FFFFFFFFFFFFFF	22	167	3.32	25.23
397	FFFFFFFFFFFFFF	21	188	3.17	28.40
402	PPPPPPPPPPPPPPPPPP	21	209	3.17	31.57
408	PPPPPPPPPPPPPPPPPPPP	26	235	3.93	35.50
414	PPPPPPPPPPPPPPPPPPPPPP	34	269	5.14	40.63
420	PPPPPPPPPPPPPPPPPPPPPP	31	300	4.68	45.32
426	PPPPPPPPPPPPPPPPPPPPPP	32	332	4.83	50.15
432	PPPPPPPPPPPPPPPPPPPPPP	38	370	5.74	55.89
439	PPPPPPPPPPPPPPPPPPPPPP	40	410	6.04	61.93
446	PPPPPPPPPPPPPPPPPPPPPP	27	437	4.08	66.01
453	PPPPPPPPPPPPPPPPPPPPPP	36	473	5.44	71.45
460	PPPPPPPPPPPPPPPPPPPPPP	29	502	4.38	75.83
468	PPPPPPPPPPPPPPPPPPPPPP	28	530	4.23	80.06
476	PPPPPPPPPPPPPPPPPPPPPP	33	563	4.98	85.05
486	PPPPPPPPPPPPPPPPPPPPPP	39	602	5.89	90.94
496	PPPPPPPPPPPPPPPPPPPPPP	29	631	4.38	95.32
508	AAAAAAAAAAAA	12	643	1.81	97.13
522	AAAAAAAAAAAA	11	654	1.66	98.79
539	AAAAAAA	7	661	1.06	99.85
563	A	1	662	0.15	100.00

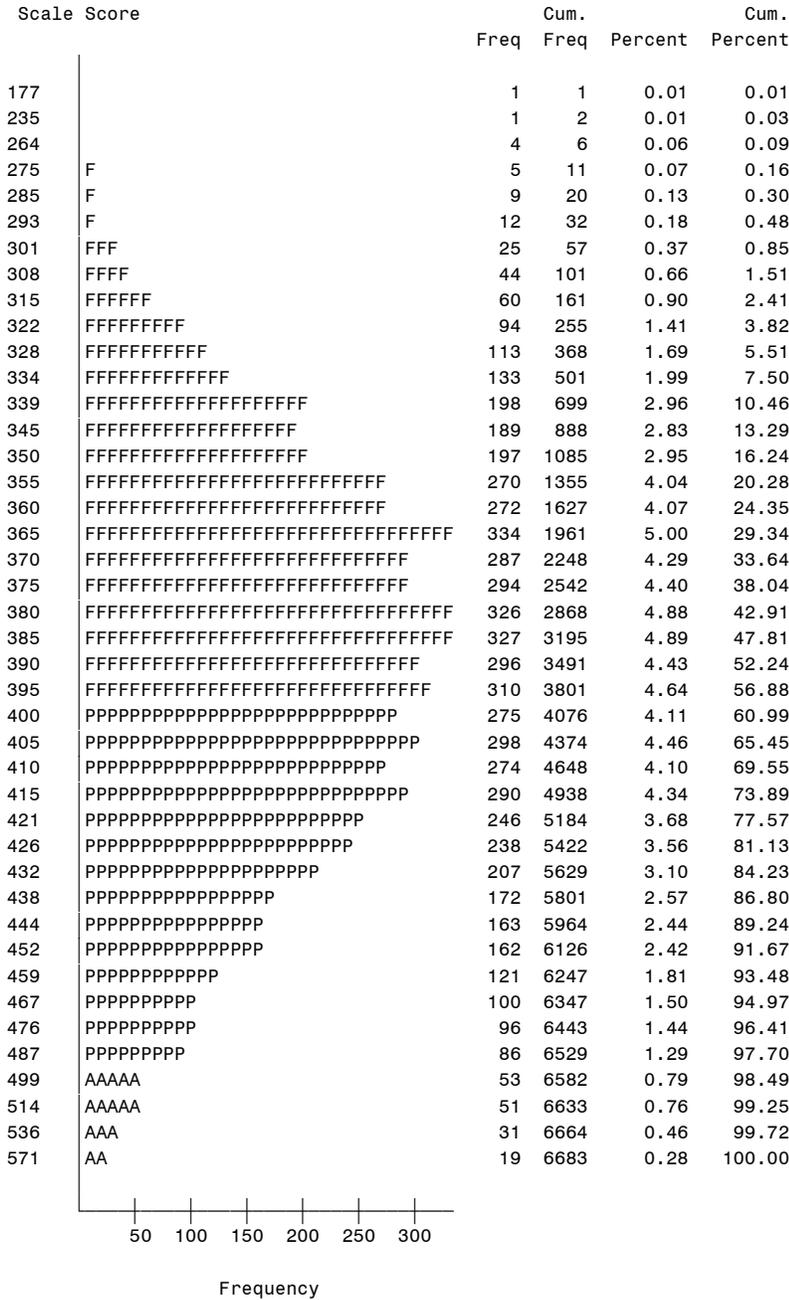


Scale Score		Cum. Freq	Cum. Freq	Percent	Cum. Percent
212		1	1	0.01	0.01
244		1	2	0.01	0.03
263		1	3	0.01	0.04
277		2	5	0.03	0.07
298	F	6	11	0.09	0.16
306	FF	16	27	0.23	0.39
313	FF	19	46	0.28	0.67
321	FFFFF	45	91	0.65	1.32
326	FFFFFF	60	151	0.87	2.19
332	FFFFFFFF	111	262	1.61	3.80
337	FFFFFFFFF	143	405	2.07	5.88
343	FFFFFFFFF	202	607	2.93	8.81
348	FFFFFFFFF	231	838	3.35	12.16
352	FFFFFFFFF	296	1134	4.29	16.45
357	FFFFFFFFF	299	1433	4.34	20.79
361	FFFFFFFFF	317	1750	4.60	25.39
365	FFFFFFFFF	339	2089	4.92	30.31
369	FFFFFFFFF	325	2414	4.71	35.02
374	FFFFFFFFF	321	2735	4.66	39.68
378	FFFFFFFFF	312	3047	4.53	44.20
382	FFFFFFFFF	333	3380	4.83	49.04
385	FFFFFFFFF	275	3655	3.99	53.02
389	FFFFFFFFF	287	3942	4.16	57.19
393	FFFFFFFFF	274	4216	3.98	61.16
397	FFFFFFFFF	256	4472	3.71	64.88
401	PPPPPPPPPPPPPPPPPPPPPP	232	4704	3.37	68.24
405	PPPPPPPPPPPPPPPPPPPPPP	231	4935	3.35	71.59
409	PPPPPPPPPPPPPPPPPPPPPP	197	5132	2.86	74.45
413	PPPPPPPPPPPPPPPPPPPPPP	201	5333	2.92	77.37
417	PPPPPPPPPPPPPPPPPPPPPP	192	5525	2.79	80.15
421	PPPPPPPPPPPPPPPPPPPPPP	162	5687	2.35	82.50
426	PPPPPPPPPPPPPPPPPPPPPP	169	5856	2.45	84.96
430	PPPPPPPPPPPPPPPPPPPPPP	140	5996	2.03	86.99
435	PPPPPPPPPPPPPPPPPPPPPP	148	6144	2.15	89.13
439	PPPPPPPPPPPPPPPPPPPPPP	129	6273	1.87	91.01
444	PPPPPPPPPPPPPPPPPPPPPP	115	6388	1.67	92.67
449	PPPPPPPPPPPPPPPPPPPPPP	99	6487	1.44	94.11
455	PPPPPPPPPPPPPPPPPPPPPP	89	6576	1.29	95.40
461	PPPPPPPPPPPPPPPPPPPPPP	80	6656	1.16	96.56
466	PPPPPPPPPPPPPPPPPPPPPP	65	6721	0.94	97.50
473	PPPPPPPPPPPPPPPPPPPPPP	43	6764	0.62	98.13
481	PPPPPPPPPPPPPPPPPPPPPP	44	6808	0.64	98.77
489	PPPPPPPPPPPPPPPPPPPPPP	25	6833	0.36	99.13
498	PPPPPPPPPPPPPPPPPPPPPP	26	6859	0.38	99.51
509	AA	19	6878	0.28	99.78
524	A	9	6887	0.13	99.91
543	A	5	6892	0.07	99.99
575		1	6893	0.01	100.00

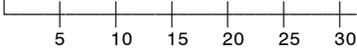


Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
311	FF	2	2	0.34	0.34
318	F	1	3	0.17	0.51
324	FF	2	5	0.34	0.84
330	FF	2	7	0.34	1.18
335	FFF	3	10	0.51	1.69
340	FFFFFFFFFFFF	12	22	2.03	3.72
345	FFFFFFFFFFFFFF	14	36	2.36	6.08
350	FFFFFFFFF	9	45	1.52	7.60
354	FFFFFFFFFFFF	12	57	2.03	9.63
359	FFFFFFFFFFFFFFFF	19	76	3.21	12.84
363	FFFFFFFFFFFFFFFFFFFFFF	24	100	4.05	16.89
367	FFFFFFFFFFFFFFFFFFFFFFFF	27	127	4.56	21.45
371	FFFFFFFFFFFFFFFFFFFFFF	23	150	3.89	25.34
375	FFFFFFFFFFFFFFFFFFFFFFFFFFFF	32	182	5.41	30.74
379	FFFFFFFFFFFFFFFFFFFFFFFFFFFF	30	212	5.07	35.81
383	FFFFFFFFFFFFFFFFFFFFFFFFFFFF	31	243	5.24	41.05
387	FFFFFFFFFFFFFFFFFFFFFFFFFFFF	34	277	5.74	46.79
391	FFFFFFFFFFFFFFFFFFFFFFFFFFFF	32	309	5.41	52.20
395	FFFFFFFFFFFFFFFFFFFFFFFFFFFF	30	339	5.07	57.26
399	FFFFFFFFFFFFFFFFFFFFFFFFFFFF	30	369	5.07	62.33
403	PP	41	410	6.93	69.26
407	PPPPPPPPPPPPPPPPPPPPPP	22	432	3.72	72.97
411	PPPPPPPPPPPPPPPPPPPP	20	452	3.38	76.35
415	PPPPPPPPPPPPPP	15	467	2.53	78.89
419	PPPPPPPPPPPP	14	481	2.36	81.25
423	PPPPPPPPPPPPPPPPPPPPPPPPPP	24	505	4.05	85.30
428	PPPPPPPPPP	10	515	1.69	86.99
432	PPPPPPPPPP	10	525	1.69	88.68
437	PPPPPPPPPPPPPP	15	540	2.53	91.22
442	PPPPPPPPPPPPPPPP	17	557	2.87	94.09
447	PPPPPPPPPP	10	567	1.69	95.78
452	PPPPP	5	572	0.84	96.62
458	PPPP	4	576	0.68	97.30
464	PPPPPP	6	582	1.01	98.31
471	PP	2	584	0.34	98.65
478	PPP	3	587	0.51	99.16
487	PPP	3	590	0.51	99.66
496	PP	2	592	0.34	100.00





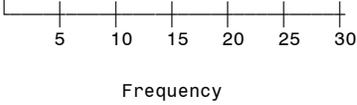
Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
281	F	1	1	0.17	0.17
297	FF	2	3	0.35	0.52
305	F	1	4	0.17	0.70
312	FF	2	6	0.35	1.05
318	FFFFF	5	11	0.87	1.92
324	FFFFFFF	8	19	1.40	3.32
330	FFFFFFFFF	10	29	1.75	5.07
336	FFFFFFFFFFFFFFF	19	48	3.32	8.39
342	FFFFFFF	8	56	1.40	9.79
347	FFFFFFFFFFFFFFF	15	71	2.62	12.41
349	F	1	72	0.17	12.59
353	FFFFFFFFFFFFFFF	17	89	2.97	15.56
358	FFFFFFFFF	12	101	2.10	17.66
363	FFFFFFFFF	14	115	2.45	20.10
368	FFFFFFFFFFFFFFF	22	137	3.85	23.95
373	FFFFFFFFFFFFFFF	21	158	3.67	27.62
378	FFFFFFFFFFFFFFF	25	183	4.37	31.99
383	FFFFFFFFFFFFFFF	21	204	3.67	35.66
385	F	1	205	0.17	35.84
388	FFFFFFFFFFFFFFF	23	228	4.02	39.86
393	FFFFFFFFFFFFFFF	20	248	3.50	43.36
398	FFFFFFFFFFFFFFF	28	276	4.90	48.25
403	PPPPPPPPPPPPPPPPPP	21	297	3.67	51.92
405	P	1	298	0.17	52.10
409	PPPPPPPPPPPPPPPPPP	21	319	3.67	55.77
414	PPPPPPPPPPPPPPPPPPPPPPPPPP	31	350	5.42	61.19
419	PPPPPPPPPPPPPPPPPPPP	23	373	4.02	65.21
425	PPPPPPPPPPPPPPPPPPPP	25	398	4.37	69.58
431	PPPPPPPPPPPPPPPPPP	19	417	3.32	72.90
438	PPPPPPPPPPPPPPPPPPPPPPPPPP	28	445	4.90	77.80
444	PPPPPPPPPPPPPPPP	17	462	2.97	80.77
451	PPPPPPPPPPPP	12	474	2.10	82.87
459	PPPPPPPPPPPPPPPPPPPP	22	496	3.85	86.71
467	PPPPPPPPPPPPPPPP	18	514	3.15	89.86
476	PPPPPPPPPPPPPPPP	16	530	2.80	92.66
487	PPPPPPPPPPPP	13	543	2.27	94.93
500	AAAAAAAAAAAA	13	556	2.27	97.20
515	AAAAAAAAA	9	565	1.57	98.78
537	AAAAA	5	570	0.87	99.65
572	AA	2	572	0.35	100.00



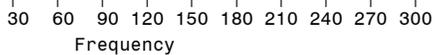
Frequency

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
205		1	1	0.02	0.02
260		3	4	0.06	0.08
269	F	4	8	0.08	0.15
278	F	9	17	0.17	0.33
285	FFF	24	41	0.46	0.79
293	FFFF	27	68	0.52	1.30
300	FFFFFF	46	114	0.88	2.19
306	FFFFFFFF	65	179	1.25	3.43
313	FFFFFFFFF	76	255	1.46	4.89
318	FFFFFFFFFF	87	342	1.67	6.56
324	FFFFFFFFFFF	123	465	2.36	8.92
330	FFFFFFFFFFF	139	604	2.67	11.59
335	FFFFFFFFFFF	150	754	2.88	14.47
340	FFFFFFFFFFF	188	942	3.61	18.07
346	FFFFFFFFFFF	196	1138	3.76	21.83
351	FFFFFFFFFFF	232	1370	4.45	26.29
356	FFFFFFFFFFF	242	1612	4.64	30.93
361	FFFFFFFFFFF	239	1851	4.59	35.51
366	FFFFFFFFFFF	262	2113	5.03	40.54
371	FFFFFFFFFFF	269	2382	5.16	45.70
376	FFFFFFFFFFF	253	2635	4.85	50.56
380	FFFFFFFFFFF	257	2892	4.93	55.49
385	FFFFFFFFFFF	246	3138	4.72	60.21
390	FFFFFFFFFFF	208	3346	3.99	64.20
395	FFFFFFFFFFF	188	3534	3.61	67.81
400	PPPPPPPPPP	182	3716	3.49	71.30
406	PPPPPPPPPP	194	3910	3.72	75.02
411	PPPPPPPPPP	166	4076	3.18	78.20
416	PPPPPPPPPP	152	4228	2.92	81.12
422	PPPPPPPPPP	145	4373	2.78	83.90
428	PPPPPPPPPP	134	4507	2.57	86.47
434	PPPPPPPPPP	110	4617	2.11	88.58
441	PPPPPPPPPP	113	4730	2.17	90.75
447	PPPPPPPPPP	102	4832	1.96	92.71
455	PPPPPPPPPP	80	4912	1.53	94.24
462	PPPPPPPPPP	64	4976	1.23	95.47
471	PPPPPPPP	55	5031	1.06	96.53
480	PPPPPPPP	55	5086	1.06	97.58
490	PPPPPP	35	5121	0.67	98.25
502	AAAAA	35	5156	0.67	98.93
516	AAA	22	5178	0.42	99.35
534	AA	15	5193	0.29	99.64
557	A	11	5204	0.21	99.85
598	A	8	5212	0.15	100.00

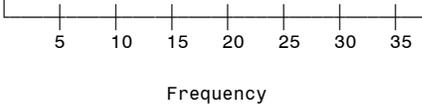
Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
285	FF	2	2	0.42	0.42
292	F	1	3	0.21	0.63
299	F	1	4	0.21	0.85
305	FF	2	6	0.42	1.27
311	FFFF	4	10	0.85	2.11
317	FFFFFF	6	16	1.27	3.38
322	FFFFFFFF	11	27	2.33	5.71
328	FFFFFF	6	33	1.27	6.98
333	FFFFFFFFFFFFFFFF	17	50	3.59	10.57
338	FFFFFFFFFFFFFF	13	63	2.75	13.32
343	FFFFFFFFFFFFFFFF	17	80	3.59	16.91
348	FFFFFFFFFFFFFFFF	20	100	4.23	21.14
353	FFFFFFFFFFFFFF	14	114	2.96	24.10
358	FFFFFFFFFFFFFFFF	24	138	5.07	29.18
363	FFFFFFFFFFFFFFFF	17	155	3.59	32.77
368	FFFFFFFFFFFFFFFF	18	173	3.81	36.58
373	FFFFFFFFFFFFFFFF	30	203	6.34	42.92
378	FFFFFFFFFFFFFFFF	20	223	4.23	47.15
383	FFFFFFFFFFFFFFFF	19	242	4.02	51.16
388	FFFFFFFFFFFFFFFF	29	271	6.13	57.29
392	FFFFFFFFFFFFFF	16	287	3.38	60.68
397	FFFFFFFFFFFFFF	23	310	4.86	65.54
402	PPPPPPPPPPPPPP	16	326	3.38	68.92
408	PPPPPPPPPP	10	336	2.11	71.04
413	PPPPPPPPPPPPPP	16	352	3.38	74.42
419	PPPPPPPPPPPPPP	15	367	3.17	77.59
425	PPPPPPPPPP	10	377	2.11	79.70
431	PPPPPPPPPP	10	387	2.11	81.82
437	PPPPPPPPPP	10	397	2.11	83.93
443	PPPPPPPPPP	10	407	2.11	86.05
450	PPPPPPPPPP	9	416	1.90	87.95
458	PPPPPP	6	422	1.27	89.22
467	PPPPPPPPPP	10	432	2.11	91.33
475	PPPPPPPP	8	440	1.69	93.02
486	PPPPPPPPPPPP	13	453	2.75	95.77
497	PPPP	4	457	0.85	96.62
511	AAAAAAA	7	464	1.48	98.10
529	AAAA	4	468	0.85	98.94
553	AAAA	4	472	0.85	99.79
592	A	1	473	0.21	100.00



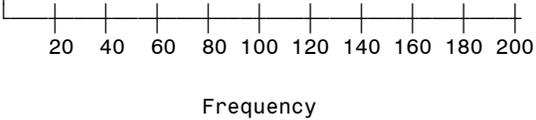
Scale Score	Freq	Cum. Freq	Percent	Cum. Percent	
91	1	1	0.01	0.01	
180	1	2	0.01	0.03	
196	1	3	0.01	0.04	
208	1	4	0.01	0.05	
220	2	6	0.03	0.08	
229	3	9	0.04	0.12	
238	F	9	18	0.12	0.24
246	FF	18	36	0.24	0.49
254	FFF	23	59	0.31	0.80
261	FFFFFF	47	106	0.64	1.44
268	FFFFFFFF	77	183	1.05	2.49
274	FFFFFFFFFF	95	278	1.29	3.78
281	FFFFFFFFFFFF	123	401	1.67	5.46
286	FFFFFFFFFFFFFF	168	569	2.29	7.74
292	FFFFFFFFFFFFFFFF	199	768	2.71	10.45
297	FFFFFFFFFFFFFFFFF	241	1009	3.28	13.73
302	FFFFFFFFFFFFFFFFFF	257	1266	3.50	17.23
307	FFFFFFFFFFFFFFFFFFF	299	1565	4.07	21.30
313	FFFFFFFFFFFFFFFFFFF	262	1827	3.57	24.86
317	FFFFFFFFFFFFFFFFFFF	258	2085	3.51	28.37
322	FFFFFFFFFFFFFFFFFFF	285	2370	3.88	32.25
326	FFFFFFFFFFFFFFFFFFF	282	2652	3.84	36.09
331	FFFFFFFFFFFFFFFFFFF	291	2943	3.96	40.05
336	FFFFFFFFFFFFFFFFFFF	263	3206	3.58	43.62
340	FFFFFFFFFFFFFFFFFFF	254	3460	3.46	47.08
345	FFFFFFFFFFFFFFFFFFF	256	3716	3.48	50.56
349	FFFFFFFFFFFFFFFFFFF	225	3941	3.06	53.63
354	FFFFFFFFFFFFFFFFFFF	237	4178	3.22	56.85
358	FFFFFFFFFFFFFFFFFFF	221	4399	3.01	59.86
363	FFFFFFFFFFFFFFFFFFF	212	4611	2.88	62.74
367	FFFFFFFFFFFFFFFFFFF	214	4825	2.91	65.66
372	FFFFFFFFFFFFFFFFFFF	197	5022	2.68	68.34
376	FFFFFFFFFFFFFFFFFFF	167	5189	2.27	70.61
381	FFFFFFFFFFFFFFFFFFF	175	5364	2.38	72.99
385	FFFFFFFFFFFFFFFFFFF	164	5528	2.23	75.22
390	FFFFFFFFFFFFFFFFFFF	180	5708	2.45	77.67
395	FFFFFFFFFFFFFFFFFFF	181	5889	2.46	80.13
399	FFFFFFFFFFFFFFFFFFF	161	6050	2.19	82.32
404	PPPPPPPPPPPPPPPP	142	6192	1.93	84.26
410	PPPPPPPPPPPPPPPP	134	6326	1.82	86.08
414	PPPPPPPPPPPPPPPP	114	6440	1.55	87.63
420	PPPPPPPPPPPPPPPP	125	6565	1.70	89.33
425	PPPPPPPPPPPPPPPP	119	6684	1.62	90.95
431	PPPPPPPPPPPP	84	6768	1.14	92.09
437	PPPPPPPPPPPP	92	6860	1.25	93.35
443	PPPPPPPPPPPP	84	6944	1.14	94.49
449	PPPPPPPPPP	71	7015	0.97	95.46
457	PPPPPPPPPP	63	7078	0.86	96.31
464	PPPPPPPPPP	67	7145	0.91	97.22
472	PPPPPPPP	49	7194	0.67	97.89
481	PPPPPP	47	7241	0.64	98.53
490	PPPPP	34	7275	0.46	98.99
501	AAA	21	7296	0.29	99.28
514	AAAA	28	7324	0.38	99.66
528	AA	14	7338	0.19	99.85
548	A	5	7343	0.07	99.92
573	A	5	7348	0.07	99.99
598		1	7349	0.01	100.00



Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
226	F	1	1	0.13	0.13
244	F	1	2	0.13	0.25
260	FFF	3	5	0.38	0.64
267	FFF	3	8	0.38	1.02
274	FFFF	4	12	0.51	1.53
280	FFFFF	5	17	0.64	2.16
286	FFFFFF	6	23	0.76	2.93
291	FFFFFFFF	12	35	1.53	4.45
297	FFFFFFFFF	13	48	1.65	6.11
302	FFFFFFFFF	14	62	1.78	7.89
307	FFFFFFFFF	15	77	1.91	9.80
312	FFFFFFFFFFFFFFFF	32	109	4.07	13.87
317	FFFFFFFFFFFFFFFF	21	130	2.67	16.54
322	FFFFFFFFFFFFFFFF	27	157	3.44	19.97
327	FFFFFFFFFFFFFFFF	35	192	4.45	24.43
331	FFFFFFFFFFFFFFFF	26	218	3.31	27.74
336	FFFFFFFFFFFFFFFF	31	249	3.94	31.68
340	FFFFFFFFFFFFFFFF	35	284	4.45	36.13
344	FFFFFFFFFFFFFFFF	29	313	3.69	39.82
349	FFFFFFFFFFFFFFFF	25	338	3.18	43.00
353	FFFFFFFFFFFFFFFF	28	366	3.56	46.56
357	FFFFFFFFFFFFFFFF	29	395	3.69	50.25
362	FFFFFFFFFFFFFFFF	37	432	4.71	54.96
366	FFFFFFFFFFFFFFFF	28	460	3.56	58.52
371	FFFFFFFFFFFFFFFF	19	479	2.42	60.94
375	FFFFFFFFFFFFFFFF	23	502	2.93	63.87
379	FFFFFFFFFFFFFFFF	26	528	3.31	67.18
383	FFFFFFFFFFFFFFFF	20	548	2.54	69.72
388	FFFFFFFFFFFFFFFF	26	574	3.31	73.03
392	FFFFFFFFFFFFFFFF	22	596	2.80	75.83
397	FFFFFFFFFFFFFFFF	16	612	2.04	77.86
401	PPPPPPPPPPPPPPPPPP	21	633	2.67	80.53
406	PPPPPPPPPPPPPPPPPP	24	657	3.05	83.59
411	PPPPPPPPPPPPPP	15	672	1.91	85.50
417	PPPPPPPPPPPP	11	683	1.40	86.90
421	PPPPPPPPPPPPPPPP	17	700	2.16	89.06
427	PPPPPPPPPPPPPPPP	19	719	2.42	91.48
432	PPPPPPPPPPPPPP	14	733	1.78	93.26
438	PPPPPPPPPPPPPP	13	746	1.65	94.91
444	PPPPPPPP	9	755	1.15	96.06
450	PPPPPP	7	762	0.89	96.95
457	PPPPP	5	767	0.64	97.58
465	PPPPPP	7	774	0.89	98.47
472	PP	2	776	0.25	98.73
481	PPPPP	5	781	0.64	99.36
490	P	1	782	0.13	99.49
501	AAA	3	785	0.38	99.87
528	A	1	786	0.13	100.00

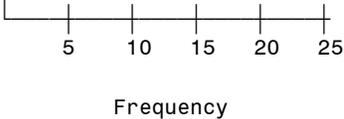


Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
252		2	2	0.03	0.03
301		1	3	0.02	0.05
308	F	3	6	0.05	0.10
313	F	7	13	0.12	0.22
319	FFF	16	29	0.27	0.49
324	FFFF	21	50	0.36	0.85
329	FFFFFFF	40	90	0.68	1.52
334	FFFFFFF	42	132	0.71	2.23
338	FFFFFFFFFFFF	74	206	1.25	3.49
342	FFFFFFFFFFFF	91	297	1.54	5.03
346	FFFFFFFFFFFF	119	416	2.01	7.04
350	FFFFFFFFFFFF	90	506	1.52	8.56
354	FFFFFFFFFFFF	143	649	2.42	10.98
357	FFFFFFFFFFFF	144	793	2.44	13.42
361	FFFFFFFFFFFF	146	939	2.47	15.89
365	FFFFFFFFFFFF	157	1096	2.66	18.54
368	FFFFFFFFFFFF	173	1269	2.93	21.47
372	FFFFFFFFFFFF	159	1428	2.69	24.16
375	FFFFFFFFFFFF	185	1613	3.13	27.29
378	FFFFFFFFFFFF	162	1775	2.74	30.03
382	FFFFFFFFFFFF	168	1943	2.84	32.88
385	FFFFFFFFFFFF	195	2138	3.30	36.18
388	FFFFFFFFFFFF	176	2314	2.98	39.15
391	FFFFFFFFFFFF	171	2485	2.89	42.05
395	FFFFFFFFFFFF	172	2657	2.91	44.96
398	FFFFFFFFFFFF	168	2825	2.84	47.80
401	PPPPPPPPPP	167	2992	2.83	50.63
404	PPPPPPPPPP	182	3174	3.08	53.71
408	PPPPPPPPPP	202	3376	3.42	57.12
411	PPPPPPPPPP	201	3577	3.40	60.52
414	PPPPPPPPPP	165	3742	2.79	63.32
418	PPPPPPPPPP	171	3913	2.89	66.21
421	PPPPPPPPPP	168	4081	2.84	69.05
425	PPPPPPPPPP	165	4246	2.79	71.84
428	PPPPPPPPPP	164	4410	2.77	74.62
432	PPPPPPPPPP	150	4560	2.54	77.16
435	PPPPPPPPPP	173	4733	2.93	80.08
440	PPPPPPPPPP	144	4877	2.44	82.52
444	PPPPPPPPPP	131	5008	2.22	84.74
448	PPPPPPPPPP	124	5132	2.10	86.84
452	PPPPPPPPPP	131	5263	2.22	89.05
457	PPPPPPPPPP	110	5373	1.86	90.91
461	PPPPPPPPPP	103	5476	1.74	92.66
466	PPPPPPPPPP	104	5580	1.76	94.42
472	PPPPPPPPPP	66	5646	1.12	95.53
478	PPPPPPPPPP	64	5710	1.08	96.62
484	PPPPPPPPPP	54	5764	0.91	97.53
492	PPPPPPPP	45	5809	0.76	98.29
500	AAAAAAA	39	5848	0.66	98.95
509	AAAAA	28	5876	0.47	99.42
520	AAAA	22	5898	0.37	99.80
534	A	6	5904	0.10	99.90
553	A	6	5910	0.10	100.00

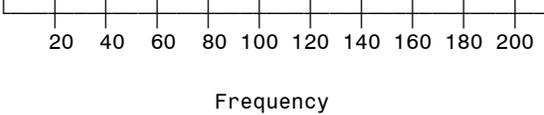


Frequency

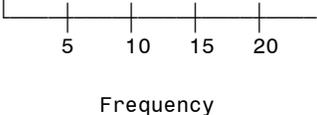
Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
318	F	1	1	0.21	0.21
323	F	1	2	0.21	0.42
328	FFF	3	5	0.63	1.05
333	FF	2	7	0.42	1.47
337	F	1	8	0.21	1.68
342	FF	2	10	0.42	2.10
346	FFFF	4	14	0.84	2.94
350	FFFFFFF	7	21	1.47	4.41
354	FFFFFFF	8	29	1.68	6.09
357	FFFFFFF	10	39	2.10	8.19
361	FFFFFFF	11	50	2.31	10.50
365	FFFFFFF	12	62	2.52	13.03
369	FFFFFFF	18	80	3.78	16.81
372	FFFFFFF	17	97	3.57	20.38
375	FFFFFFF	13	110	2.73	23.11
379	FFFFFFF	13	123	2.73	25.84
382	FFFFFFF	17	140	3.57	29.41
386	FFFFFFF	11	151	2.31	31.72
389	FFFFFFF	12	163	2.52	34.24
392	FFFFFFF	15	178	3.15	37.39
395	FFFFFFF	13	191	2.73	40.13
399	FFFFFFF	13	204	2.73	42.86
402	PPPPPPPPPPPPPP	15	219	3.15	46.01
406	PPPPPPPPPPPPPPPP	19	238	3.99	50.00
409	PPPPPPPPPPPPPP	16	254	3.36	53.36
412	PPPPPPPPPPPPPPPP	19	273	3.99	57.35
416	PPPPPPPPPPPPPPPPPP	25	298	5.25	62.61
419	PPPPPPPPPPPPPP	16	314	3.36	65.97
423	PPPPPPPPPPPPPPPP	19	333	3.99	69.96
426	PPPPPPPPPPPPPPPP	18	351	3.78	73.74
430	PPPPPP	6	357	1.26	75.00
434	PPPPPPPPPPPPPPPPPP	20	377	4.20	79.20
438	PPPPPPPPPP	10	387	2.10	81.30
442	PPPPPPPPPPPP	13	400	2.73	84.03
446	PPPPPPPPPP	9	409	1.89	85.92
450	PPPPPPPPPPPP	12	421	2.52	88.45
455	PPPPPP	6	427	1.26	89.71
459	PPPPPPPPPP	9	436	1.89	91.60
464	PPPPPPPPPPPP	11	447	2.31	93.91
469	PPPPPP	5	452	1.05	94.96
475	PPPP	4	456	0.84	95.80
481	PPP	3	459	0.63	96.43
487	PP	2	461	0.42	96.85
495	PPPP	5	466	1.05	97.90
503	A	1	467	0.21	98.11
512	AAAA	4	471	0.84	98.95
523	A	1	472	0.21	99.16
537	AAA	3	475	0.63	99.79
589	A	1	476	0.21	100.00



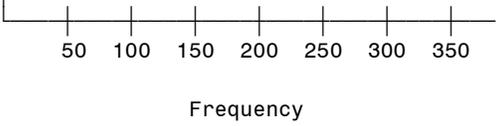
Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
258		1	1	0.02	0.02
284	F	4	5	0.08	0.10
298	FF	9	14	0.18	0.27
304	FFF	14	28	0.27	0.54
310	FFFF	24	52	0.47	1.01
315	FFFFFF	51	103	0.99	2.00
320	FFFFFFF	46	149	0.89	2.90
324	FFFFFFFF	75	224	1.46	4.36
329	FFFFFFFFF	99	323	1.93	6.28
333	FFFFFFFFF	107	430	2.08	8.36
337	FFFFFFFFF	134	564	2.61	10.97
342	FFFFFFFFF	163	727	3.17	14.14
346	FFFFFFFFF	164	891	3.19	17.33
349	FFFFFFFFF	168	1059	3.27	20.60
353	FFFFFFFFF	170	1229	3.31	23.90
357	FFFFFFFFF	179	1408	3.48	27.38
360	FFFFFFFFF	212	1620	4.12	31.51
364	FFFFFFFFF	160	1780	3.11	34.62
367	FFFFFFFFF	199	1979	3.87	38.49
371	FFFFFFFFF	185	2164	3.60	42.08
374	FFFFFFFFF	180	2344	3.50	45.59
378	FFFFFFFFF	167	2511	3.25	48.83
381	FFFFFFFFF	206	2717	4.01	52.84
384	FFFFFFFFF	164	2881	3.19	56.03
388	FFFFFFFFF	172	3053	3.35	59.37
391	FFFFFFFFF	145	3198	2.82	62.19
394	FFFFFFFFF	153	3351	2.98	65.17
398	FFFFFFFFF	132	3483	2.57	67.74
401	PPPPPPPPPP	145	3628	2.82	70.56
404	PPPPPPPPPP	129	3757	2.51	73.06
408	PPPPPPPPPP	140	3897	2.72	75.79
412	PPPPPPPPPP	123	4020	2.39	78.18
415	PPPPPPPPPP	115	4135	2.24	80.42
418	PPPPPPPPPP	109	4244	2.12	82.54
422	PPPPPPPPPP	105	4349	2.04	84.58
426	PPPPPPPPPP	100	4449	1.94	86.52
430	PPPPPPPPPP	92	4541	1.79	88.31
434	PPPPPPPPPP	91	4632	1.77	90.08
438	PPPPPPPPPP	77	4709	1.50	91.58
442	PPPPPPPPPP	76	4785	1.48	93.06
447	PPPPPPPPPP	60	4845	1.17	94.22
451	PPPPPPPPPP	67	4912	1.30	95.53
456	PPPPPPPP	38	4950	0.74	96.27
461	PPPPPPPP	52	5002	1.01	97.28
467	PPPPPP	37	5039	0.72	98.00
473	PPPPP	27	5066	0.53	98.52
479	PPPP	18	5084	0.35	98.87
486	PPPP	20	5104	0.39	99.26
493	PPP	17	5121	0.33	99.59
502	AA	9	5130	0.18	99.77
512	A	6	5136	0.12	99.88
524		2	5138	0.04	99.92
539	A	4	5142	0.08	100.00



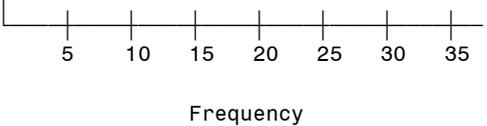
Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
285	F	1	1	0.21	0.21
305	FFF	3	4	0.62	0.83
316	FF	2	6	0.42	1.25
320	FFFF	4	10	0.83	2.08
325	FFFFFFF	7	17	1.46	3.53
330	FFFFFFFFF	9	26	1.87	5.41
334	FFFFFFF	8	34	1.66	7.07
338	FFFFFFFFF	11	45	2.29	9.36
342	FFFFFFF	9	54	1.87	11.23
346	FFFFFFFFFFFFFFF	17	71	3.53	14.76
350	FFFFFFF	11	82	2.29	17.05
353	FFFFFFFFFFFFFFF	18	100	3.74	20.79
357	FFFFFFFFFFFFFFF	18	118	3.74	24.53
361	FFFFFFFFFFFFFFF	15	133	3.12	27.65
364	FFFFFFFFFFFFFFF	12	145	2.49	30.15
367	FFFFFFFFFFFFFFF	14	159	2.91	33.06
371	FFFFFFFFFFFFFFF	13	172	2.70	35.76
374	FFFFFFFFFFFFFFF	21	193	4.37	40.12
378	FFFFFFF	9	202	1.87	42.00
381	FFFFFFF	11	213	2.29	44.28
384	FFFFFFFFFFFFFFF	17	230	3.53	47.82
388	FFFFFFFFFFFFFFF	16	246	3.33	51.14
391	FFFFFFFFFFFFFFF	24	270	4.99	56.13
394	FFFFFFF	9	279	1.87	58.00
398	FFFFFFFFFFFFFFF	12	291	2.49	60.50
401	PPPPPPPPPP	12	303	2.49	62.99
404	PPPPPPPPPP	11	314	2.29	65.28
408	PPPPPPPPPPPP	14	328	2.91	68.19
411	PPPPPPPP	8	336	1.66	69.85
415	PPPPPPPPPPPP	14	350	2.91	72.77
418	PPPPPPPPPPPP	13	363	2.70	75.47
422	PPPPPPPP	8	371	1.66	77.13
426	PPPPPPPP	7	378	1.46	78.59
430	PPPPPPPPPPPPPP	15	393	3.12	81.70
433	PPPPPPPPPPPPPP	14	407	2.91	84.62
437	PPPPPPPP	7	414	1.46	86.07
442	PPPPPPPPPPPP	11	425	2.29	88.36
446	PPPPPPPP	8	433	1.66	90.02
450	PPPPPP	6	439	1.25	91.27
455	PPPPPP	5	444	1.04	92.31
461	PPPPPP	6	450	1.25	93.56
466	PP	2	452	0.42	93.97
472	PPPPPPPPPP	10	462	2.08	96.05
478	PPPPPP	5	467	1.04	97.09
485	PPPP	4	471	0.83	97.92
492	P	1	472	0.21	98.13
501	AAA	3	475	0.62	98.75
511	AAA	3	478	0.62	99.38
523	A	1	479	0.21	99.58
538	A	1	480	0.21	99.79
558	A	1	481	0.21	100.00



Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
301		2	2	0.02	0.02
310		2	4	0.02	0.05
317	F	9	13	0.10	0.15
324	FF	19	32	0.22	0.37
330	FFF	27	59	0.31	0.68
336	FFF	34	93	0.39	1.07
342	FFFFF	54	147	0.62	1.69
347	FFFFFFF	79	226	0.91	2.59
352	FFFFFFFFF	101	327	1.16	3.75
357	FFFFFFFFFFF	135	462	1.55	5.30
362	FFFFFFFFFFFFF	160	622	1.84	7.14
367	FFFFFFFFFFFFFFF	182	804	2.09	9.23
371	FFFFFFFFFFFFFFFFF	198	1002	2.27	11.50
375	FFFFFFFFFFFFFFFFFFF	217	1219	2.49	13.99
380	FFFFFFFFFFFFFFFFFFFFF	277	1496	3.18	17.17
384	FFFFFFFFFFFFFFFFFFFFF	276	1772	3.17	20.34
388	FFFFFFFFFFFFFFFFFFFFF	308	2080	3.53	23.87
392	FFFFFFFFFFFFFFFFFFFFF	302	2382	3.47	27.34
396	FFFFFFFFFFFFFFFFFFFFF	326	2708	3.74	31.08
400	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	344	3052	3.95	35.03
404	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	341	3393	3.91	38.94
408	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	350	3743	4.02	42.96
412	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	344	4087	3.95	46.91
416	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	354	4441	4.06	50.97
420	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	337	4778	3.87	54.84
424	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	368	5146	4.22	59.06
429	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	380	5526	4.36	63.42
433	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	349	5875	4.01	67.43
438	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	355	6230	4.07	71.50
442	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	350	6580	4.02	75.52
447	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	326	6906	3.74	79.26
452	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	306	7212	3.51	82.77
458	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	269	7481	3.09	85.86
463	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	259	7740	2.97	88.83
469	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	248	7988	2.85	91.68
476	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	197	8185	2.26	93.94
483	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	170	8355	1.95	95.89
491	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	141	8496	1.62	97.51
500	AAAAAAAA	93	8589	1.07	98.58
511	AAAAAA	57	8646	0.65	99.23
525	AAAA	37	8683	0.42	99.66
544	AA	21	8704	0.24	99.90
575	A	9	8713	0.10	100.00

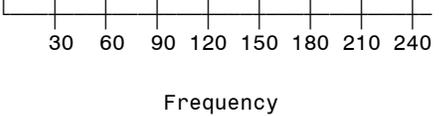


Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
320	F	1	1	0.14	0.14
327	F	1	2	0.14	0.28
332	FFFFF	5	7	0.70	0.98
337	FFFF	4	11	0.56	1.54
342	F	1	12	0.14	1.68
347	FFFF	4	16	0.56	2.24
352	FFFFFFFFFFFF	12	28	1.68	3.93
356	FFFF	4	32	0.56	4.49
360	FFFFFFF	7	39	0.98	5.47
364	FFFFFFF	7	46	0.98	6.45
368	FFFFFFFFFFF	11	57	1.54	7.99
372	FFFFFFFFFFFFF	14	71	1.96	9.96
376	FFFFFFFFFFFF	11	82	1.54	11.50
380	FFFFFFFFFFFFFFFFF	19	101	2.66	14.17
384	FFFFFFFFFFFFFFFF	15	116	2.10	16.27
388	FFFFFFFFFFFFFFFFFFFFF	28	144	3.93	20.20
391	FFFFFFFFFFFFFFFFFFFF	16	160	2.24	22.44
395	FFFFFFFFFFFFFFFFFFFFF	24	184	3.37	25.81
399	FFFFFFFFFFFFFFFFFFFFF	23	207	3.23	29.03
403	PPPPPPPPPPPPPPPPPPPP	22	229	3.09	32.12
407	PPPPPPPPPPPPPPPPPPPP	23	252	3.23	35.34
411	PPPPPPPPPPPPPPPPPPPP	27	279	3.79	39.13
415	PPPPPPPPPPPPPPPPPPPPPP	31	310	4.35	43.48
419	PPPPPPPPPPPPPPPPPPPPPP	27	337	3.79	47.27
423	PPPPPPPPPPPPPPPPPPPPPP	24	361	3.37	50.63
427	PPPPPPPPPPPPPPPPPPPPPPPP	34	395	4.77	55.40
431	PPPPPPPPPPPPPPPPPPPPPPPP	32	427	4.49	59.89
436	PPPPPPPPPPPPPPPPPPPPPPPPPP	35	462	4.91	64.80
441	PPPPPPPPPPPPPPPPPPPPPPPPPP	34	496	4.77	69.57
446	PPPPPPPPPPPPPPPPPPPPPPPPPP	29	525	4.07	73.63
451	PPPPPPPPPPPPPPPPPPPPPPPPPP	31	556	4.35	77.98
456	PPPPPPPPPPPPPPPPPPPPPPPPPPPP	37	593	5.19	83.17
462	PPPPPPPPPPPPPPPPPPPPPPPPPP	26	619	3.65	86.82
469	PPPPPPPPPPPPPPPPPPPPPP	21	640	2.95	89.76
476	PPPPPPPPPPPPPPPP	16	656	2.24	92.01
484	PPPPPPPPPPPPPPPP	16	672	2.24	94.25
493	PPPPPPPPPPPPPPPP	16	688	2.24	96.49
504	AAAAAAA	7	695	0.98	97.48
518	AAAAAAAAAAAA	11	706	1.54	99.02
536	AAAAA	5	711	0.70	99.72
568	AA	2	713	0.28	100.00



Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
238		1	1	0.02	0.02
258		1	2	0.02	0.04
283		2	4	0.04	0.08
293		2	6	0.04	0.13
301		2	8	0.04	0.17
309	F	11	19	0.23	0.40
315	F	7	26	0.15	0.55
322	FFF	19	45	0.40	0.95
327	FFFFFF	47	92	0.99	1.93
333	FFFFFFF	43	135	0.90	2.84
338	FFFFFFF	58	193	1.22	4.05
343	FFFFFFF	82	275	1.72	5.78
348	FFFFFFF	107	382	2.25	8.03
353	FFFFFFF	84	466	1.76	9.79
357	FFFFFFF	110	576	2.31	12.10
361	FFFFFFF	143	719	3.00	15.11
365	FFFFFFF	158	877	3.32	18.42
370	FFFFFFF	167	1044	3.51	21.93
374	FFFFFFF	191	1235	4.01	25.95
378	FFFFFFF	184	1419	3.87	29.81
382	FFFFFFF	209	1628	4.39	34.20
386	FFFFFFF	236	1864	4.96	39.16
390	FFFFFFF	224	2088	4.71	43.87
394	FFFFFFF	250	2338	5.25	49.12
398	FFFFFFF	242	2580	5.08	54.20
402	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	246	2826	5.17	59.37
406	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	219	3045	4.60	63.97
410	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	207	3252	4.35	68.32
414	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	204	3456	4.29	72.61
419	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	183	3639	3.84	76.45
423	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	170	3809	3.57	80.02
428	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	183	3992	3.84	83.87
433	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	147	4139	3.09	86.95
437	PPPPPPPPPPPPPP	106	4245	2.23	89.18
442	PPPPPPPPPPPPPPPP	119	4364	2.50	91.68
447	PPPPPPPPPPPPPP	88	4452	1.85	93.53
453	PPPPPPPPPPPPPP	84	4536	1.76	95.29
459	PPPPPPPP	50	4586	1.05	96.34
465	PPPPPPPP	60	4646	1.26	97.61
472	PPPPPP	48	4694	1.01	98.61
480	PPP	19	4713	0.40	99.01
487	PP	16	4729	0.34	99.35
497	PP	12	4741	0.25	99.60
509	AA	13	4754	0.27	99.87
523		3	4757	0.06	99.94
542		2	4759	0.04	99.98
574		1	4760	0.02	100.00



Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
325	F	1	1	0.28	0.28
331	FF	2	3	0.55	0.83
336	FF	2	5	0.55	1.38
341	FF	2	7	0.55	1.93
346	FFFF	4	11	1.10	3.03
350	FFFF	4	15	1.10	4.13
355	FFF	3	18	0.83	4.96
360	FFFF	4	22	1.10	6.06
364	FFFFFFF	7	29	1.93	7.99
368	FFFFF	5	34	1.38	9.37
372	FFFFFFF	6	40	1.65	11.02
377	FFFFFFF	6	46	1.65	12.67
381	FFFFFFFFF	10	56	2.75	15.43
385	FFFFFFFFF	10	66	2.75	18.18
389	FFFFFFF	6	72	1.65	19.83
393	FFFFFFFFF	9	81	2.48	22.31
397	FFFFFFFFFFFFFFF	16	97	4.41	26.72
401	PPPPPPPPPPPPPPPP	17	114	4.68	31.40
405	PPPPPPPPPPPPPPPP	17	131	4.68	36.09
409	PPPPPPPPPPPPPPPPPP	20	151	5.51	41.60
413	PPPPPPPPPPPPPPPP	16	167	4.41	46.01
418	PPPPPPPPPPPPPPPP	17	184	4.68	50.69
422	PPPPPPPPPPPPPPPP	17	201	4.68	55.37
427	PPPPPPPPPPPPPPPPPPPP	24	225	6.61	61.98
431	PPPPPPPPPPPPPPPP	17	242	4.68	66.67
436	PPPPPPPPPPPPPP	15	257	4.13	70.80
441	PPPPPPPPPPPPPPPP	19	276	5.23	76.03
447	PPPPPPPPPPPPPP	16	292	4.41	80.44
452	PPPPPPPPPPPP	14	306	3.86	84.30
458	PPPPPPPPPP	11	317	3.03	87.33
464	PPPPPPPPPPPPPP	16	333	4.41	91.74
471	PPPPPPPPPPPPPP	15	348	4.13	95.87
478	PP	2	350	0.55	96.42
487	PPPPP	5	355	1.38	97.80
497	PPP	3	358	0.83	98.62
508	AAA	3	361	0.83	99.45
522	A	1	362	0.28	99.72
542	A	1	363	0.28	100.00

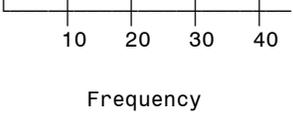
Earth Science - Core 1

Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
227		1	1	0.01	0.01
243		2	3	0.02	0.03
268		2	5	0.02	0.06
278		3	8	0.03	0.09
287	F	7	15	0.08	0.17
295	FF	22	37	0.25	0.41
302	FF	17	54	0.19	0.60
309	FFFF	36	90	0.40	1.01
316	FFFF	44	134	0.49	1.50
322	FFFFFF	59	193	0.66	2.16
327	FFFFFFFF	96	289	1.07	3.23
333	FFFFFFFFFF	116	405	1.30	4.53
339	FFFFFFFFFFFF	156	561	1.74	6.27
344	FFFFFFFFFFFFF	190	751	2.13	8.40
349	FFFFFFFFFFFFF	234	985	2.62	11.02
354	FFFFFFFFFFFFF	252	1237	2.82	13.84
359	FFFFFFFFFFFFF	286	1523	3.20	17.03
364	FFFFFFFFFFFFF	323	1846	3.61	20.65
368	FFFFFFFFFFFFF	372	2218	4.16	24.81
373	FFFFFFFFFFFFF	380	2598	4.25	29.06
378	FFFFFFFFFFFFF	365	2963	4.08	33.14
382	FFFFFFFFFFFFF	395	3358	4.42	37.56
387	FFFFFFFFFFFFF	400	3758	4.47	42.03
392	FFFFFFFFFFFFF	391	4149	4.37	46.40
397	FFFFFFFFFFFFF	400	4549	4.47	50.88
401	PP	419	4968	4.69	55.56
406	PP	385	5353	4.31	59.87
411	PP	375	5728	4.19	64.06
416	PP	337	6065	3.77	67.83
421	PP	358	6423	4.00	71.84
426	PP	351	6774	3.93	75.76
431	PP	288	7062	3.22	78.98
437	PP	286	7348	3.20	82.18
442	PP	253	7601	2.83	85.01
448	PP	235	7836	2.63	87.64
455	PP	233	8069	2.61	90.25
461	PP	194	8263	2.17	92.42
468	PP	175	8438	1.96	94.37
476	PP	129	8567	1.44	95.82
485	PP	86	8653	0.96	96.78
495	PP	105	8758	1.17	97.95
505	AAAAAAA	77	8835	0.86	98.81
519	AAAAA	50	8885	0.56	99.37
535	AAA	30	8915	0.34	99.71
557	AA	19	8934	0.21	99.92
594	A	7	8941	0.08	100.00

Frequency

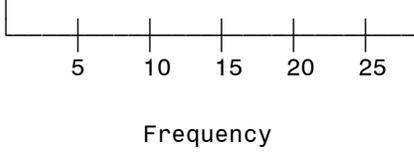
Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
285	F	1	1	0.12	0.12
312	F	2	3	0.23	0.35
317	F	1	4	0.12	0.47
323	FF	3	7	0.35	0.82
329	FFFFF	9	16	1.05	1.87
334	FFF	6	22	0.70	2.57
339	FFFFF	10	32	1.17	3.74
344	FFFFFFFF	17	49	1.99	5.73
349	FFFFFFF	14	63	1.64	7.37
354	FFFFFFF	15	78	1.75	9.12
358	FFFFFFF	18	96	2.11	11.23
363	FFFFFFFFFFFFFFFF	35	131	4.09	15.32
368	FFFFFFF	14	145	1.64	16.96
372	FFFFFFFFFFF	22	167	2.57	19.53
377	FFFFFFFFFFFF	27	194	3.16	22.69
382	FFFFFFFFFFFF	30	224	3.51	26.20
387	FFFFFFFFFFFFFFFF	37	261	4.33	30.53
392	FFFFFFFFFFFFFFFF	31	292	3.63	34.15
396	FFFFFFFFFFFFFFFF	32	324	3.74	37.89
401	PPPPPPPPPPPP	30	354	3.51	41.40
406	PPPPPPPPPPPPPP	39	393	4.56	45.96
412	PPPPPPPPPPPPPP	39	432	4.56	50.53
417	PPPPPPPPPPPPPP	33	465	3.86	54.39
422	PPPPPPPPPPPPPP	31	496	3.63	58.01
428	PPPPPPPPPPPPPP	29	525	3.39	61.40
434	PPPPPPPPPPPPPP	40	565	4.68	66.08
440	PPPPPPPPPPPPPP	44	609	5.15	71.23
447	PPPPPPPPPPPPPP	37	646	4.33	75.56
453	PPPPPPPPPPPPPP	41	687	4.80	80.35
460	PPPPPPPPPPPPPP	37	724	4.33	84.68
469	PPPPPPPPPPPPPP	31	755	3.63	88.30
477	PPPPPPPPPPPPPP	29	784	3.39	91.70
488	PPPPPPPPPPPP	25	809	2.92	94.62
499	AAAAAAA	15	824	1.75	96.37
512	AAAAAAA	19	843	2.22	98.60
529	AAAAA	10	853	1.17	99.77
551	A	2	855	0.23	100.00



Multiple-Choice Core 1 - Writing Prompt 1

Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

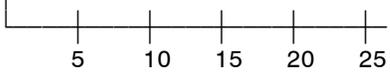
Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
251	F	1	1	0.27	0.27
264	F	1	2	0.27	0.53
284	F	1	3	0.27	0.80
302	F	1	4	0.27	1.07
310	FF	2	6	0.53	1.60
318	F	1	7	0.27	1.87
325	FF	2	9	0.53	2.41
333	FF	2	11	0.53	2.94
340	FFFFF	5	16	1.34	4.28
347	FFFFFFF	7	23	1.87	6.15
353	FFFFFFFFFFFF	13	36	3.48	9.63
360	FFFFFFFFF	9	45	2.41	12.03
366	FFFFFFF	7	52	1.87	13.90
372	FFFFFFFFFFFFFFFFFFFF	21	73	5.61	19.52
379	FFFFFFFFFFFFFFFFFFFF	20	93	5.35	24.87
384	FFFFFFFFFFFFFFFFFFFF	16	109	4.28	29.14
391	FFFFFFFFFFFFFFFFFFFF	24	133	6.42	35.56
396	FFFFFFFFFFFF	13	146	3.48	39.04
403	PPPPPPPPPPPPPPPP	16	162	4.28	43.32
409	PPPPPPPPPPPPPPPPPPPPPP	25	187	6.68	50.00
415	PPPPPPPPPPPPPPPPPPPPPP	23	210	6.15	56.15
422	PPPPPPPPPPPPPPPPPPPP	19	229	5.08	61.23
428	PPPPPPPPPPPPPPPPPPPPPPPP	28	257	7.49	68.72
436	PPPPPPPPPPPPPPPPPPPPPP	22	279	5.88	74.60
443	PPPPPPPPPPPPPP	14	293	3.74	78.34
451	PPPPPPPPPPPPPPPPPPPPPP	23	316	6.15	84.49
459	PPPPPPPPPPPP	13	329	3.48	87.97
468	PPPPPPPP	9	338	2.41	90.37
486	PPPPPPPP	9	347	2.41	92.78
497	PPPPPP	6	353	1.60	94.39
512	AAAAAAAAA	10	363	2.67	97.06
535	AAAAAAAA	8	371	2.14	99.20
600	AAA	3	374	0.80	100.00



Multiple-Choice Core 1 - Writing Prompt 2

Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
274	FFF	3	3	0.79	0.79
283	F	1	4	0.26	1.05
291	F	1	5	0.26	1.32
298	F	1	6	0.26	1.58
305	F	1	7	0.26	1.84
318	FFFFFF	6	13	1.58	3.42
325	FFFFF	5	18	1.32	4.74
331	FFFFFFFF	9	27	2.37	7.11
337	FFFFFFF	7	34	1.84	8.95
343	FFFFFFF	6	40	1.58	10.53
349	FFFFFFFF	9	49	2.37	12.89
355	FFFFFFFF	9	58	2.37	15.26
361	FFFFFFFFFFFFFFFF	18	76	4.74	20.00
367	FFFFFFFFFFFFFF	13	89	3.42	23.42
373	FFFFFFFFFFFFFFFF	16	105	4.21	27.63
379	FFFFFFFFFFFFFFFFFFFFFFFF	25	130	6.58	34.21
385	FFFFFFFFFFFFFFFFFFFFFF	18	148	4.74	38.95
391	FFFFFFFFFFFFFFFFFFFF	16	164	4.21	43.16
396	FFFFFFFFFFFFFFFFFFFFF	20	184	5.26	48.42
403	PPPPPPPPPPPPPPPPPPPPPP	26	210	6.84	55.26
409	PPPPPPPPPPPPPPPP	16	226	4.21	59.47
416	PPPPPPPPPPPPPPPP	17	243	4.47	63.95
424	PPPPPPPPPPPPPPPPPPPP	24	267	6.32	70.26
432	PPPPPPPPPPPPPPPPPP	19	286	5.00	75.26
440	PPPPPPPPPPPPPPPPPP	21	307	5.53	80.79
449	PPPPPPPPPPPPPPPP	17	324	4.47	85.26
459	PPPPPPPPPPPPPP	16	340	4.21	89.47
469	PPPPPPPPPP	10	350	2.63	92.11
479	PPPPPPPPPP	11	361	2.89	95.00
491	PPPPPPPP	8	369	2.11	97.11
504	AAAAA	5	374	1.32	98.42
520	AA	2	376	0.53	98.95
546	AAA	3	379	0.79	99.74
600	A	1	380	0.26	100.00

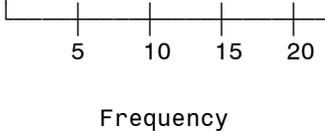


Frequency

Multiple-Choice Core 2 - Writing Prompt 1

Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
289	F	1	1	0.34	0.34
298	FFFF	4	5	1.37	1.71
312	F	1	6	0.34	2.05
318	FF	2	8	0.68	2.74
325	FFFFFF	6	14	2.05	4.79
331	F	1	15	0.34	5.14
337	FFF	3	18	1.03	6.16
343	FFFFFF	6	24	2.05	8.22
349	FF	2	26	0.68	8.90
355	FFFFFFF	7	33	2.40	11.30
361	FFFFFF	6	39	2.05	13.36
367	FFFFF	5	44	1.71	15.07
372	FFFFF	5	49	1.71	16.78
378	FFFFFFFFFFFFFF	15	64	5.14	21.92
384	FFFFFF	6	70	2.05	23.97
390	FFFFFFFFFFFF	12	82	4.11	28.08
395	FFFFFFFFFFFFFF	15	97	5.14	33.22
401	PPPPPPPPP	10	107	3.42	36.64
407	PPPPPPPPPPPPPPPP	18	125	6.16	42.81
413	PPPPPPPPP	10	135	3.42	46.23
419	PPPPPPPPPPPPPPPP	18	153	6.16	52.40
426	PPPPPPPPPPPPPPPP	16	169	5.48	57.88
433	PPPPPPPPPPPPPPPPPP	22	191	7.53	65.41
440	PPPPPPPPPPPPPPPPPP	19	210	6.51	71.92
449	PPPPPPPPPPPPPPPP	15	225	5.14	77.05
457	PPPPPPPPPPPPPPPPPP	19	244	6.51	83.56
466	PPPPPPPPP	9	253	3.08	86.64
475	PPPPPPPPPPP	12	265	4.11	90.75
486	PPPPPPPPP	9	274	3.08	93.84
499	AAAAAAA	8	282	2.74	96.58
515	AAAA	4	286	1.37	97.95
541	AAAAA	5	291	1.71	99.66
600	A	1	292	0.34	100.00

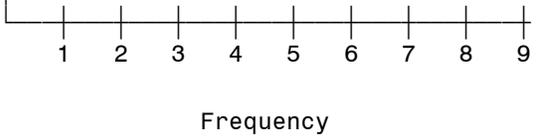


Scale Score Histogram for VA SOL: Fall 1998 Grade 8

Multiple-Choice Core 2 - Writing Prompt 2

Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

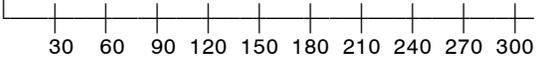
Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
337	FFFF	1	1	1.69	1.69
355	FFFFFFFF	2	3	3.39	5.08
361	FFFFFFFF	2	5	3.39	8.47
379	FFFF	1	6	1.69	10.17
385	FFFF	1	7	1.69	11.86
391	FFFF	1	8	1.69	13.56
396	FFFF	1	9	1.69	15.25
403	PPPPPPPPPPPPPPPP	4	13	6.78	22.03
409	PPPPPPPPPPPPPPPP	4	17	6.78	28.81
416	PPPPPPPPPPPPPPPP	4	21	6.78	35.59
424	PP	8	29	13.56	49.15
432	PP	7	36	11.86	61.02
440	PP	9	45	15.25	76.27
449	PP	8	53	13.56	89.83
459	PPPPPPPP	2	55	3.39	93.22
479	PPPP	1	56	1.69	94.92
491	PPPP	1	57	1.69	96.61
520	AAAA	1	58	1.69	98.31
546	AAAA	1	59	1.69	100.00



Multiple-Choice Core 1 - Writing Prompt 1

Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
156		1	1	0.02	0.02
237		3	4	0.05	0.07
251	F	4	8	0.07	0.13
263		3	11	0.05	0.19
272	F	6	17	0.10	0.29
280	F	10	27	0.17	0.45
288	FF	12	39	0.20	0.66
294	FF	17	56	0.29	0.94
300	FF	18	74	0.30	1.24
307	FFF	20	94	0.34	1.58
312	FFFFF	38	132	0.64	2.22
317	FFFFF	38	170	0.64	2.86
323	FFFFFFF	58	228	0.98	3.84
328	FFFFFFF	57	285	0.96	4.79
333	FFFFFFF	56	341	0.94	5.74
338	FFFFFFFFF	67	408	1.13	6.86
342	FFFFFFFFFFF	91	499	1.53	8.39
347	FFFFFFFFFFFFF	104	603	1.75	10.14
352	FFFFFFFFFFFFFFF	122	725	2.05	12.20
357	FFFFFFFFFFFFFFFFF	137	862	2.30	14.50
362	FFFFFFFFFFFFFFFFF	150	1012	2.52	17.02
367	FFFFFFFFFFFFFFFFF	161	1173	2.71	19.73
371	FFFFFFFFFFFFFFFFF	184	1357	3.10	22.83
376	FFFFFFFFFFFFFFFFF	195	1552	3.28	26.11
381	FFFFFFFFFFFFFFFFF	217	1769	3.65	29.76
386	FFFFFFFFFFFFFFFFF	237	2006	3.99	33.74
392	FFFFFFFFFFFFFFFFF	268	2274	4.51	38.25
396	FFFFFFFFFFFFFFFFF	235	2509	3.95	42.20
402	PP	294	2803	4.95	47.15
407	PP	268	3071	4.51	51.66
413	PP	292	3363	4.91	56.57
418	PP	257	3620	4.32	60.89
424	PP	309	3929	5.20	66.09
430	PP	257	4186	4.32	70.41
437	PP	244	4430	4.10	74.52
443	PP	267	4697	4.49	79.01
450	PP	237	4934	3.99	82.99
458	PP	204	5138	3.43	86.43
465	PP	184	5322	3.10	89.52
474	PPPPPPPPPPPPPPPP	115	5437	1.93	91.46
483	PPPPPPPPPPPPPPPPPP	124	5561	2.09	93.54
492	PPPPPPPPPPPPPPPP	103	5664	1.73	95.27
504	AAAAAAAAAAAAA	98	5762	1.65	96.92
517	AAAAAAAAA	62	5824	1.04	97.96
534	AAAAAAAAA	65	5889	1.09	99.06
563	AAAAA	41	5930	0.69	99.75
600	AA	15	5945	0.25	100.00

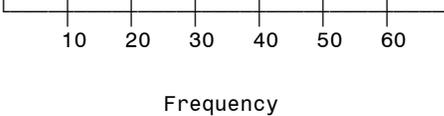


Frequency

Multiple-Choice Core 1 - Writing Prompt 2

Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

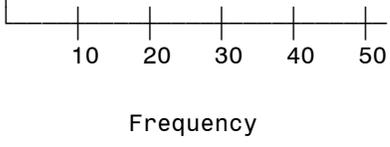
Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
238	F	1	1	0.08	0.08
252	F	1	2	0.08	0.16
273	F	1	3	0.08	0.24
282	FF	3	6	0.24	0.47
289	F	1	7	0.08	0.55
296	FF	3	10	0.24	0.79
302	FFFFF	9	19	0.71	1.49
308	FFFF	7	26	0.55	2.04
313	FFFFFFF	11	37	0.86	2.91
319	FFFFFFF	12	49	0.94	3.85
324	FFFFFFF	16	65	1.26	5.11
329	FFFFFFF	18	83	1.41	6.52
333	FFFFFFF	18	101	1.41	7.93
338	FFFFFFF	19	120	1.49	9.43
343	FFFFFFF	17	137	1.34	10.76
348	FFFFFFF	20	157	1.57	12.33
353	FFFFFFF	31	188	2.44	14.77
358	FFFFFFF	38	226	2.99	17.75
363	FFFFFFF	38	264	2.99	20.74
367	FFFFFFF	39	303	3.06	23.80
372	FFFFFFF	51	354	4.01	27.81
377	FFFFFFF	49	403	3.85	31.66
382	FFFFFFF	43	446	3.38	35.04
387	FFFFFFF	44	490	3.46	38.49
392	FFFFFFF	55	545	4.32	42.81
397	FFFFFFF	52	597	4.08	46.90
402	PPPPPPPPPPPPPPPPPPPP	46	643	3.61	50.51
408	PPPPPPPPPPPPPPPPPPPP	48	691	3.77	54.28
413	PPPPPPPPPPPPPPPPPPPP	67	758	5.26	59.54
418	PPPPPPPPPPPPPPPPPPPP	42	800	3.30	62.84
424	PPPPPPPPPPPPPPPPPPPP	54	854	4.24	67.09
430	PPPPPPPPPPPPPPPPPPPP	52	906	4.08	71.17
437	PPPPPPPPPPPPPPPPPPPP	51	957	4.01	75.18
444	PPPPPPPPPPPPPPPPPP	37	994	2.91	78.08
451	PPPPPPPPPPPPPPPPPP	43	1037	3.38	81.46
459	PPPPPPPPPPPPPPPPPP	40	1077	3.14	84.60
467	PPPPPPPPPPPPPPPPPP	36	1113	2.83	87.43
476	PPPPPPPPPPPPPPPPPP	35	1148	2.75	90.18
486	PPPPPPPPPPPPPPPP	29	1177	2.28	92.46
497	PPPPPPPPPP	21	1198	1.65	94.11
508	AAAAAAAAAAAA	28	1226	2.20	96.31
522	AAAAAAA	14	1240	1.10	97.41
540	AAAAAAA	17	1257	1.34	98.74
568	AAAAA	12	1269	0.94	99.69
600	AA	4	1273	0.31	100.00



Multiple-Choice Core 2 - Writing Prompt 2

Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
241	F	2	2	0.22	0.22
252	F	1	3	0.11	0.34
262	F	1	4	0.11	0.45
284	F	1	5	0.11	0.56
291	FF	3	8	0.34	0.89
297	FFF	5	13	0.56	1.45
302	FFF	5	18	0.56	2.01
308	FFF	6	24	0.67	2.68
313	FFFF	9	33	1.01	3.69
318	FF	3	36	0.34	4.03
323	FFFF	9	45	1.01	5.03
328	FFFF	9	54	1.01	6.04
333	FFFF	10	64	1.12	7.16
338	FFFFFF	13	77	1.45	8.61
342	FFFFFFF	18	95	2.01	10.63
347	FFFFFFF	17	112	1.90	12.53
352	FFFFFF	14	126	1.57	14.09
357	FFFFFFFF	24	150	2.68	16.78
362	FFFFFFFF	19	169	2.13	18.90
367	FFFFFFFFF	29	198	3.24	22.15
371	FFFFFFFFF	24	222	2.68	24.83
377	FFFFFFFFF	43	265	4.81	29.64
382	FFFFFFFFF	31	296	3.47	33.11
387	FFFFFFFFF	35	331	3.91	37.02
392	FFFFFFFFF	52	383	5.82	42.84
398	FFFFFFFFF	48	431	5.37	48.21
404	PPPPPPPPPPPPPPPPPPPP	42	473	4.70	52.91
409	PPPPPPPPPPPPPPPPPPPP	47	520	5.26	58.17
415	PPPPPPPPPPPPPPPPPPPP	49	569	5.48	63.65
422	PPPPPPPPPPPPPPPPPPPP	40	609	4.47	68.12
429	PPPPPPPPPPPPPPPPPPPP	43	652	4.81	72.93
436	PPPPPPPPPPPPPPPPPPPP	50	702	5.59	78.52
444	PPPPPPPPPPPPPPPPPPPP	39	741	4.36	82.89
452	PPPPPPPPPPPPPPPPPPPP	44	785	4.92	87.81
461	PPPPPPPPPPPP	26	811	2.91	90.72
471	PPPPPPPPPPPP	23	834	2.57	93.29
481	PPPPPP	12	846	1.34	94.63
492	PPPPP	9	855	1.01	95.64
504	AAAAA	18	873	2.01	97.65
519	AAA	5	878	0.56	98.21
537	AAAA	7	885	0.78	98.99
567	AAA	5	890	0.56	99.55
600	AA	4	894	0.45	100.00



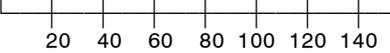
Grade 3 : English: Reading + Writing

Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Core 2

SS English: Reading+Writing

		Freq	Cum. Freq	Percent	Cum. Percent
225		1	1	0.03	0.03
237	F	3	4	0.10	0.14
247	F	3	7	0.10	0.24
257	F	5	12	0.17	0.41
265	FF	9	21	0.31	0.71
273	FFF	17	38	0.58	1.29
281	FFFF	22	60	0.75	2.03
288	FFFF	22	82	0.75	2.78
295	FFFFFFF	33	115	1.12	3.90
301	FFFFFFF	40	155	1.36	5.26
307	FFFFFFF	48	203	1.63	6.88
313	FFFFFFF	36	239	1.22	8.10
319	FFFFFFF	54	293	1.83	9.94
325	FFFFFFF	48	341	1.63	11.56
330	FFFFFFF	50	391	1.70	13.26
336	FFFFFFF	62	453	2.10	15.36
341	FFFFFFF	55	508	1.87	17.23
347	FFFFFFF	74	582	2.51	19.74
353	FFFFFFF	70	652	2.37	22.11
358	FFFFFFF	64	716	2.17	24.28
364	FFFFFFF	84	800	2.85	27.13
369	FFFFFFF	93	893	3.15	30.28
375	FFFFFFF	85	978	2.88	33.16
381	FFFFFFF	102	1080	3.46	36.62
387	FFFFFFF	79	1159	2.68	39.30
393	FFFFFFF	117	1276	3.97	43.27
399	FFFFFFF	109	1385	3.70	46.97
406	PPPPPPPPPPPPPPPPPPPPPP	121	1506	4.10	51.07
412	PPPPPPPPPPPPPPPPPPPPPP	148	1654	5.02	56.09
419	PPPPPPPPPPPPPPPPPPPPPP	128	1782	4.34	60.43
427	PPPPPPPPPPPPPPPPPPPPPP	111	1893	3.76	64.19
435	PPPPPPPPPPPPPPPPPPPPPP	137	2030	4.65	68.84
444	PPPPPPPPPPPPPPPPPPPPPP	142	2172	4.82	73.65
453	PPPPPPPPPPPPPPPPPPPPPP	143	2315	4.85	78.50
464	PPPPPPPPPPPPPPPPPPPPPP	152	2467	5.15	83.66
476	PPPPPPPPPPPPPPPPPPPPPP	114	2581	3.87	87.52
490	PPPPPPPPPPPPPPPPPPPPPP	124	2705	4.20	91.73
508	AAAAAAAAAAAAAAAAAAAAA	112	2817	3.80	95.52
533	AAAAAAAAAAAAA	70	2887	2.37	97.90
573	AAAAAAAAA	44	2931	1.49	99.39
600	AAAA	18	2949	0.61	100.00



Frequency

Grade 3 : Mathematics

Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Core 1

SS Mathematics

		Freq	Cum. Freq	Percent	Cum. Percent
0		4	4	0.00	0.00
34		2	6	0.00	0.01
87		1	7	0.00	0.01
144		3	10	0.00	0.01
164		2	12	0.00	0.01
180		1	13	0.00	0.02
194		17	30	0.02	0.04
206		26	56	0.03	0.07
218		45	101	0.05	0.12
229	F	78	179	0.09	0.22
238	F	130	309	0.16	0.37
248	FF	175	484	0.21	0.58
257	FFF	280	764	0.34	0.92
265	FFF	308	1072	0.37	1.29
273	FFFF	456	1528	0.55	1.85
281	FFFFF	588	2116	0.71	2.56
289	FFFFFF	683	2799	0.82	3.38
296	FFFFFFF	811	3610	0.98	4.36
303	FFFFFFF	856	4466	1.03	5.39
311	FFFFFFF	991	5457	1.20	6.59
317	FFFFFFF	1125	6582	1.36	7.95
325	FFFFFFF	1215	7797	1.47	9.41
331	FFFFFFF	1324	9121	1.60	11.01
338	FFFFFFF	1499	10620	1.81	12.82
345	FFFFFFF	1578	12198	1.91	14.73
352	FFFFFFF	1671	13869	2.02	16.75
359	FFFFFFF	1806	15675	2.18	18.93
366	FFFFFFF	1941	17616	2.34	21.27
373	FFFFFFF	1962	19578	2.37	23.64
380	FFFFFFF	2160	21738	2.61	26.25
387	FFFFFFF	2354	24092	2.84	29.09
394	FFFFFFF	2403	26495	2.90	31.99
402	PPPPPP	2437	28932	2.94	34.93
410	PPPPPP	2691	31623	3.25	38.18
417	PPPPPP	2906	34529	3.51	41.69
426	PPPPPP	3034	37563	3.66	45.36
434	PPPPPP	3358	40921	4.05	49.41
443	PPPPPP	3409	44330	4.12	53.53
452	PPPPPP	3826	48156	4.62	58.15
463	PPPPPP	3889	52045	4.70	62.84
473	PPPPPP	4064	56109	4.91	67.75
485	PPPPPP	4119	60228	4.97	72.72
498	PPPPPP	4155	64383	5.02	77.74
512	AAAAAAAA	4172	68555	5.04	82.78
529	AAAAAAAA	4000	72555	4.83	87.61
548	AAAAAAAA	3526	76081	4.26	91.87
573	AAAAAAAA	2866	78947	3.46	95.33
582	AAAAAAAA	2154	81101	2.60	97.93
591	AAAAAAAA	1278	82379	1.54	99.47
600	AAAA	438	82817	0.53	100.00

500 1000 1500 2000 2500 3000 3500 4000

Frequency

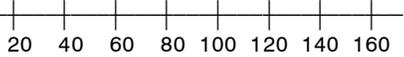
Grade 3 : Mathematics

Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Core 2

SS Mathematics

		Cum. Freq	Cum. Percent
219		1	0.03
230		2	0.07
239	F	3	0.10
248	F	5	0.17
257	FF	10	0.34
265	F	7	0.24
274	FF	12	0.41
281	FFFF	18	0.61
289	FFFFF	24	0.81
296	FFFFFFF	34	1.15
304	FFFFF	26	0.88
311	FFFFFFF	35	1.19
318	FFFFFFF	36	1.22
324	FFFFFFFFF	45	1.53
331	FFFFFFF	30	1.02
339	FFFFFFFFF	57	1.93
345	FFFFFFFFF	57	1.93
352	FFFFFFFFFFF	70	2.37
359	FFFFFFFFFFF	58	1.97
365	FFFFFFFFFFF	61	2.07
373	FFFFFFFFFFF	78	2.64
380	FFFFFFFFFFF	93	3.15
387	FFFFFFFFFFF	90	3.05
394	FFFFFFFFFFF	110	3.73
401	PPPPPPPPPPPPPPPPPP	100	3.39
409	PPPPPPPPPPPPPPPPPP	125	4.24
417	PPPPPPPPPPPPPPPPPP	110	3.73
425	PPPPPPPPPPPPPPPPPP	125	4.24
434	PPPPPPPPPPPPPPPPPP	122	4.14
443	PPPPPPPPPPPPPPPPPP	126	4.27
453	PPPPPPPPPPPPPPPPPP	126	4.27
462	PPPPPPPPPPPPPPPPPP	168	5.70
474	PPPPPPPPPPPPPPPPPP	144	4.88
485	PPPPPPPPPPPPPPPPPP	154	5.22
498	PPPPPPPPPPPPPPPPPP	143	4.85
512	AAAAAAAAAAAAAAAAAAAA	142	4.82
530	AAAAAAAAAAAAAAAAAAAA	128	4.34
549	AAAAAAAAAAAAAAAAAAAA	89	3.02
574	AAAAAAAAAAAAAAAAAAAA	85	2.88
583	AAAAAAAAAAAA	55	1.87
592	AAAAAAA	35	1.19
600	AA	10	0.34



Frequency

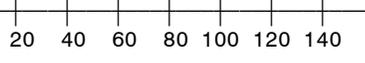
Grade 3 : History & Social Science

Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Core 2

SS History/Social Science

		Freq	Cum. Freq	Percent	Cum. Percent
253		1	1	0.03	0.03
265	F	6	7	0.20	0.24
276	FF	9	16	0.31	0.54
285	FFF	13	29	0.44	0.98
294	FF	12	41	0.41	1.39
302	FFFFFF	29	70	0.98	2.37
310	FFFFFFF	28	98	0.95	3.32
317	FFFFFFFFF	54	152	1.83	5.15
324	FFFFFFFFFFF	64	216	2.17	7.32
330	FFFFFFFFF	46	262	1.56	8.88
337	FFFFFFFFFFF	62	324	2.10	10.99
343	FFFFFFFFFFF	66	390	2.24	13.22
349	FFFFFFFFFFFFF	82	472	2.78	16.01
355	FFFFFFFFFFFFF	80	552	2.71	18.72
361	FFFFFFFFFFFFFFF	94	646	3.19	21.91
367	FFFFFFFFFFFFFFF	99	745	3.36	25.26
373	FFFFFFFFFFFFFFF	97	842	3.29	28.55
379	FFFFFFFFFFFFFFF	120	962	4.07	32.62
385	FFFFFFFFFFFFFFF	112	1074	3.80	36.42
391	FFFFFFFFFFFFFFF	123	1197	4.17	40.59
397	FFFFFFFFFFFFFFF	130	1327	4.41	45.00
404	PPPPPPPPPPPPPPPPPPPPPPPP	125	1452	4.24	49.24
410	PPPPPPPPPPPPPPPPPPPPPPPP	118	1570	4.00	53.24
417	PPPPPPPPPPPPPPPPPPPPPPPP	142	1712	4.82	58.05
424	PPPPPPPPPPPPPPPPPPPPPPPP	138	1850	4.68	62.73
431	PPPPPPPPPPPPPPPPPPPPPPPP	120	1970	4.07	66.80
439	PPPPPPPPPPPPPPPPPPPPPPPP	156	2126	5.29	72.09
448	PPPPPPPPPPPPPPPPPPPPPPPP	131	2257	4.44	76.53
457	PPPPPPPPPPPPPPPPPPPPPPPP	136	2393	4.61	81.15
467	PPPPPPPPPPPPPPPPPPPPPPPP	114	2507	3.87	85.01
479	PPPPPPPPPPPPPPPPPPPPPPPP	98	2605	3.32	88.34
493	PPPPPPPPPPPPPPPPPPPPPPPP	113	2718	3.83	92.17
510	AAAAAAAAAAAAAAAAAAAA	95	2813	3.22	95.39
533	AAAAAAAAAAAAA	64	2877	2.17	97.56
571	AAAAAAAAA	51	2928	1.73	99.29
600	AAAA	21	2949	0.71	100.00

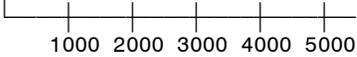


Grade 3 : Science

Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Core 1

SS Science	Freq	Cum. Freq	Percent	Cum. Percent
0	6	6	0.01	0.01
109	2	8	0.00	0.01
154	2	10	0.00	0.01
181	2	12	0.00	0.01
201	4	16	0.00	0.02
218	3	19	0.00	0.02
231	24	43	0.03	0.05
243	41	84	0.05	0.10
255	80	164	0.10	0.20
265 F	123	287	0.15	0.35
274 F	206	493	0.25	0.60
283 F	277	770	0.33	0.93
292 FF	425	1195	0.51	1.44
300 FFF	542	1737	0.65	2.10
308 FFFF	759	2496	0.92	3.01
316 FFFF	789	3285	0.95	3.97
323 FFFFF	1022	4307	1.23	5.20
331 FFFFFF	1228	5535	1.48	6.68
338 FFFFFFF	1325	6860	1.60	8.28
345 FFFFFFFF	1502	8362	1.81	10.10
352 FFFFFFFF	1856	10218	2.24	12.34
360 FFFFFFFF	2045	12263	2.47	14.81
367 FFFFFFFF	2237	14500	2.70	17.51
374 FFFFFFFF	2420	16920	2.92	20.43
382 FFFFFFFF	2808	19728	3.39	23.82
389 FFFFFFFF	3117	22845	3.76	27.58
397 FFFFFFFF	3424	26269	4.13	31.72
404 P	3713	29982	4.48	36.20
413 P	4056	34038	4.90	41.10
421 P	4386	38424	5.30	46.40
430 P	4796	43220	5.79	52.19
440 P	5095	48315	6.15	58.34
450 P	5271	53586	6.36	64.70
461 P	5436	59022	6.56	71.27
473 P	5463	64485	6.60	77.86
487 P	5178	69663	6.25	84.12
503 A	4592	74255	5.54	89.66
524 A	3826	78081	4.62	94.28
551 A	2741	80822	3.31	97.59
595 A	1517	82339	1.83	99.42
600 AA	478	82817	0.58	100.00



Frequency

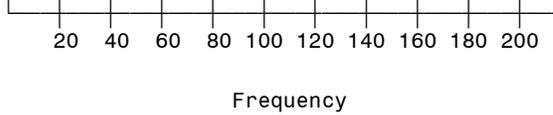
Grade 3 : Science

Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Core 2

SS Science

		Freq	Cum. Freq	Percent	Cum. Percent
213		1	1	0.03	0.03
239		2	3	0.07	0.10
251		2	5	0.07	0.17
261	F	5	10	0.17	0.34
270	F	5	15	0.17	0.51
280	FF	9	24	0.31	0.81
288	FFF	15	39	0.51	1.32
297	FFFF	22	61	0.75	2.07
304	FFFF	21	82	0.71	2.78
312	FFFFF	26	108	0.88	3.66
320	FFFFFF	35	143	1.19	4.85
328	FFFFFF	32	175	1.09	5.93
335	FFFFFFF	47	222	1.59	7.53
342	FFFFFFF	44	266	1.49	9.02
349	FFFFFFF	47	313	1.59	10.61
357	FFFFFFFFF	53	366	1.80	12.41
364	FFFFFFFFF	64	430	2.17	14.58
371	FFFFFFFF	79	509	2.68	17.26
379	FFFFFFFF	85	594	2.88	20.14
386	FFFFFFFFF	125	719	4.24	24.38
394	FFFFFFFFF	106	825	3.59	27.98
402	PPPPPPPPPPPPPPPPPPPPPPPPPP	124	949	4.20	32.18
410	PPPPPPPPPPPPPPPPPPPPPPPPPP	121	1070	4.10	36.28
418	PPPPPPPPPPPPPPPPPPPPPPPPPP	133	1203	4.51	40.79
427	PPPPPPPPPPPPPPPPPPPPPPPPPP	178	1381	6.04	46.83
437	PPPPPPPPPPPPPPPPPPPPPPPPPP	188	1569	6.38	53.20
447	PPPPPPPPPPPPPPPPPPPPPPPPPP	178	1747	6.04	59.24
458	PPPPPPPPPPPPPPPPPPPPPPPPPP	202	1949	6.85	66.09
470	PPPPPPPPPPPPPPPPPPPPPPPPPP	211	2160	7.15	73.25
483	PPPPPPPPPPPPPPPPPPPPPPPPPP	216	2376	7.32	80.57
500	AAAAAAAAAAAAAAAAAAAAAAAAAAAA	180	2556	6.10	86.67
519	AAAAAAAAAAAAAAAAAAAAAAAAAAAA	157	2713	5.32	92.00
547	AAAAAAAAAAAAAAAAAAAAAAAAAAAA	130	2843	4.41	96.41
591	AAAAAAAAAAAAA	68	2911	2.31	98.71
600	AAAAAAA	38	2949	1.29	100.00



Grade 5 : English: Literature and Research

Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Core 1

SS English: Reading/Lit. & Res.	Freq	Cum. Freq	Percent	Cum. Percent
0	14	14	0.02	0.02
156	2	16	0.00	0.02
193	1	17	0.00	0.02
215	2	19	0.00	0.02
232	10	29	0.01	0.04
245	14	43	0.02	0.06
256	36	79	0.05	0.10
266	59	138	0.08	0.18
275 F	118	256	0.15	0.33
284 F	172	428	0.22	0.56
291 F	256	684	0.33	0.89
298 FF	337	1021	0.44	1.33
305 FF	494	1515	0.64	1.98
312 FFF	526	2041	0.69	2.66
318 FFF	608	2649	0.79	3.46
324 FFF	644	3293	0.84	4.30
330 FFFF	808	4101	1.05	5.35
336 FFFF	850	4951	1.11	6.46
341 FFFFF	1013	5964	1.32	7.79
347 FFFFFF	1106	7070	1.44	9.23
352 FFFFFF	1222	8292	1.60	10.82
358 FFFFFFF	1394	9686	1.82	12.64
364 FFFFFFFF	1471	11157	1.92	14.57
369 FFFFFFFF	1626	12783	2.12	16.69
375 FFFFFFFF	1799	14582	2.35	19.04
380 FFFFFFFF	1885	16467	2.46	21.50
386 FFFFFFFF	2144	18611	2.80	24.30
392 FFFFFFFF	2318	20929	3.03	27.32
398 FFFFFFFF	2513	23442	3.28	30.60
404 P	2833	26275	3.70	34.30
411 P	3015	29290	3.94	38.24
417 P	3352	32642	4.38	42.61
424 P	3650	36292	4.76	47.38
432 P	3846	40138	5.02	52.40
440 P	4231	44369	5.52	57.92
449 P	4406	48775	5.75	63.67
459 P	4668	53443	6.09	69.77
470 P	4950	58393	6.46	76.23
483 P	5008	63401	6.54	82.77
500 A	4799	68200	6.26	89.03
522 A	4147	72347	5.41	94.45
559 A	2897	75244	3.78	98.23
600 A	1357	76601	1.77	100.00

1000 2000 3000 4000 5000

Frequency

SS English: Reading/Lit. & Res.

		Freq	Cum. Freq	Percent	Cum. Percent
249		1	1	0.04	0.04
260	F	3	4	0.11	0.14
270	F	4	8	0.14	0.29
279	FF	9	17	0.32	0.61
287	FF	10	27	0.36	0.97
294	FFF	17	44	0.61	1.58
301	FFF	14	58	0.50	2.08
307	FFFF	25	83	0.90	2.98
314	FFFFF	28	111	1.01	3.98
320	FFFFFF	35	146	1.26	5.24
325	FFFFFF	30	176	1.08	6.32
331	FFFFFFF	35	211	1.26	7.57
336	FFFFFFF	40	251	1.44	9.01
342	FFFFFFF	42	293	1.51	10.52
347	FFFFFFFFF	49	342	1.76	12.28
352	FFFFFFFFF	60	402	2.15	14.43
358	FFFFFFFFF	46	448	1.65	16.08
363	FFFFFFFFF	50	498	1.79	17.88
368	FFFFFFFFF	56	554	2.01	19.89
374	FFFFFFFFFFF	72	626	2.58	22.47
379	FFFFFFFFFFF	53	679	1.90	24.37
385	FFFFFFFFFFF	59	738	2.12	26.49
390	FFFFFFFFFFF	67	805	2.40	28.89
396	FFFFFFFFFFF	77	882	2.76	31.66
402	PPPPPPPPPPPPPPPPPPPP	115	997	4.13	35.79
408	PPPPPPPPPPPPPPPPPP	101	1098	3.63	39.41
415	PPPPPPPPPPPPPPPPPP	99	1197	3.55	42.96
422	PPPPPPPPPPPPPPPPPPPP	143	1340	5.13	48.10
429	PPPPPPPPPPPPPPPPPPPP	161	1501	5.78	53.88
437	PPPPPPPPPPPPPPPPPPPP	190	1691	6.82	60.70
446	PPPPPPPPPPPPPPPPPPPP	198	1889	7.11	67.80
455	PPPPPPPPPPPPPPPPPPPP	209	2098	7.50	75.31
467	PPPPPPPPPPPPPPPPPPPP	207	2305	7.43	82.74
480	PPPPPPPPPPPPPPPPPPPP	178	2483	6.39	89.12
496	PPPPPPPPPPPPPPPPPPPP	141	2624	5.06	94.19
518	AAAAAAAAAAAAAAAAAAAA	105	2729	3.77	97.95
555	AAAAAAAA	43	2772	1.54	99.50
600	AAA	14	2786	0.50	100.00

20 40 60 80 100 120 140 160 180 200

Frequency

Grade 5 : Mathematics

Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Core 1

SS Mathematics

		Cum. Freq	Percent	Cum. Percent
0		18	0.02	0.02
141		5	0.01	0.03
179		5	0.01	0.04
203		2	0.00	0.04
219		4	0.01	0.04
233		3	0.00	0.05
244		18	0.02	0.07
254		26	0.03	0.11
263	F	61	0.08	0.19
271	FF	123	0.16	0.35
278	FFF	215	0.28	0.63
285	FFFF	327	0.43	1.05
292	FFFFF	406	0.53	1.58
298	FFFFFF	535	0.70	2.28
304	FFFFFFF	681	0.89	3.17
310	FFFFFFFF	817	1.07	4.24
315	FFFFFFFFF	935	1.22	5.46
320	FFFFFFFFF	1071	1.40	6.86
326	FFFFFFFFF	1203	1.57	8.43
331	FFFFFFFFF	1253	1.64	10.06
336	FFFFFFFFF	1474	1.92	11.99
341	FFFFFFFFF	1535	2.00	13.99
346	FFFFFFFFF	1644	2.15	16.14
350	FFFFFFFFF	1835	2.40	18.53
355	FFFFFFFFF	1927	2.52	21.05
360	FFFFFFFFF	2047	2.67	23.72
365	FFFFFFFFF	2165	2.83	26.55
369	FFFFFFFFF	2212	2.89	29.43
374	FFFFFFFFF	2347	3.06	32.50
379	FFFFFFFFF	2402	3.14	35.63
384	FFFFFFFFF	2531	3.30	38.94
389	FFFFFFFFF	2548	3.33	42.26
394	FFFFFFFFF	2562	3.34	45.61
399	FFFFFFFFF	2606	3.40	49.01
405	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	2649	3.46	52.47
410	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	2722	3.55	56.02
416	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	2738	3.57	59.60
422	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	2885	3.77	63.36
428	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	2781	3.63	66.99
435	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	2838	3.70	70.70
442	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	2783	3.63	74.33
449	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	2757	3.60	77.93
457	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	2733	3.57	81.50
466	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	2743	3.58	85.08
476	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	2607	3.40	88.48
487	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	2349	3.07	91.55
500	AAAAAAAAAAAAAAAAAAAAAAAAAAAA	2157	2.82	94.37
517	AAAAAAAAAAAAAAAAAAAAAAAAAAAA	1773	2.31	96.68
540	AAAAAAAAAAAAAAAAAAAA	1368	1.79	98.47
579	AAAAAAAAAA	845	1.10	99.57
600	AAAA	330	0.43	100.00

Frequency

Grade 5 : Mathematics

Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Core 2

SS Mathematics

		Cum.	Cum.		
		Freq	Freq	Percent	Percent
242		1	1	0.04	0.04
252		1	2	0.04	0.07
261		1	3	0.04	0.11
269		1	4	0.04	0.14
277		2	6	0.07	0.22
284	F	7	13	0.25	0.47
290	FF	8	21	0.29	0.75
297	FFF	14	35	0.50	1.26
303	FFFF	22	57	0.79	2.05
309	FFFFF	24	81	0.86	2.91
315	FFFFFF	30	111	1.08	3.98
320	FFFFFFF	35	146	1.26	5.24
326	FFFFFFFF	52	198	1.87	7.11
331	FFFFFFFFF	59	257	2.12	9.22
336	FFFFFFFFF	48	305	1.72	10.95
341	FFFFFFFFFFFFFF	80	385	2.87	13.82
346	FFFFFFFFFFFFFF	74	459	2.66	16.48
351	FFFFFFFFFFFFFF	71	530	2.55	19.02
356	FFFFFFFFFFFFFFF	94	624	3.37	22.40
361	FFFFFFFFFFFFFFF	87	711	3.12	25.52
366	FFFFFFFFFFFFFFF	101	812	3.63	29.15
371	FFFFFFFFFFFFFFF	102	914	3.66	32.81
376	FFFFFFFFFFFFFFF	96	1010	3.45	36.25
381	FFFFFFFFFFFFFFF	132	1142	4.74	40.99
386	FFFFFFFFFFFFFFF	108	1250	3.88	44.87
391	FFFFFFFFFFFFFFF	114	1364	4.09	48.96
397	FFFFFFFFFFFFFFF	124	1488	4.45	53.41
402	PPPPPPPPPPPPPPPPPPPPPP	124	1612	4.45	57.86
408	PPPPPPPPPPPPPPPPPPPP	109	1721	3.91	61.77
413	PPPPPPPPPPPPPPPPPP	95	1816	3.41	65.18
419	PPPPPPPPPPPPPPPPPPPP	117	1933	4.20	69.38
426	PPPPPPPPPPPPPPPPPPPP	113	2046	4.06	73.44
432	PPPPPPPPPPPPPPPPPP	95	2141	3.41	76.85
439	PPPPPPPPPPPPPPPPPP	97	2238	3.48	80.33
446	PPPPPPPPPPPPPPPP	80	2318	2.87	83.20
454	PPPPPPPPPPPPPPPP	90	2408	3.23	86.43
462	PPPPPPPPPPPPPP	75	2483	2.69	89.12
471	PPPPPPPPPPPPPPPP	88	2571	3.16	92.28
481	PPPPPPPPPPPP	63	2634	2.26	94.54
493	PPPPPPPPPPPP	60	2694	2.15	96.70
507	AAAAAAAAA	51	2745	1.83	98.53
524	AAAAA	23	2768	0.83	99.35
548	AA	12	2780	0.43	99.78
586	A	5	2785	0.18	99.96
600		1	2786	0.04	100.00

20 40 60 80 100 120

Frequency

Grade 5 : History & Social Science

Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Core 1

SS History/Social Science

	Freq	Cum. Freq	Percent	Cum. Percent
0	6	6	0.01	0.01
164	1	7	0.00	0.01
224	6	13	0.01	0.02
241	15	28	0.02	0.04
254	28	56	0.04	0.07
265 F	69	125	0.09	0.16
275 F	137	262	0.18	0.34
285 FF	233	495	0.30	0.65
293 FFFF	400	895	0.52	1.17
301 FFFFFF	606	1501	0.79	1.96
308 FFFFFFFF	780	2281	1.02	2.98
314 FFFFFFFFFF	1077	3358	1.41	4.38
321 FFFFFFFFFFFF	1313	4671	1.71	6.10
327 FFFFFFFFFFFFFF	1512	6183	1.97	8.07
333 FFFFFFFFFFFFFFFF	1778	7961	2.32	10.39
339 FFFFFFFFFFFFFFFFFF	2041	10002	2.66	13.06
345 FFFFFFFFFFFFFFFFFFFF	2208	12210	2.88	15.94
350 FFFFFFFFFFFFFFFFFFFFFF	2453	14663	3.20	19.14
356 FFFFFFFFFFFFFFFFFFFFFFFF	2701	17364	3.53	22.67
361 FFFFFFFFFFFFFFFFFFFFFFFFFF	2860	20224	3.73	26.40
367 FFFFFFFFFFFFFFFFFFFFFFFFFF	2885	23109	3.77	30.17
372 FFFFFFFFFFFFFFFFFFFFFFFFFF	3139	26248	4.10	34.27
378 FFFFFFFFFFFFFFFFFFFFFFFFFF	3193	29441	4.17	38.43
384 FFFFFFFFFFFFFFFFFFFFFFFFFF	3386	32827	4.42	42.85
390 FFFFFFFFFFFFFFFFFFFFFFFFFF	3469	36296	4.53	47.38
396 FFFFFFFFFFFFFFFFFFFFFFFFFF	3742	40038	4.89	52.27
402 PFFFFFFFFFFFFFFFFFFFFFFFFF	3753	43791	4.90	57.17
408 PFFFFFFFFFFFFFFFFFFFFFFFFF	3765	47556	4.92	62.08
415 PFFFFFFFFFFFFFFFFFFFFFFFFF	3651	51207	4.77	66.85
422 PFFFFFFFFFFFFFFFFFFFFFFFFF	3807	55014	4.97	71.82
429 PFFFFFFFFFFFFFFFFFFFFFFFFF	3749	58763	4.89	76.71
437 PFFFFFFFFFFFFFFFFFFFFFFFFF	3594	62357	4.69	81.40
446 PFFFFFFFFFFFFFFFFFFFFFFFFF	3423	65780	4.47	85.87
456 PFFFFFFFFFFFFFFFFFFFFFFFFF	2965	68745	3.87	89.74
467 PFFFFFFFFFFFFFFFFFFFFFFFFF	2583	71328	3.37	93.12
480 PFFFFFFFFFFFFFFFFFFFFFFFFF	2139	73467	2.79	95.91
497 PFFFFFFFFFFFFFFFFFFFFFFFFF	1568	75035	2.05	97.96
519 AAAAAAAAAA	977	76012	1.28	99.23
555 AAAAAA	450	76462	0.59	99.82
600 A	139	76601	0.18	100.00

500 1000 1500 2000 2500 3000 3500

Frequency

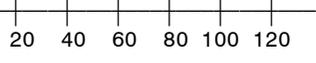
Grade 5 : History & Social Science

Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Core 2

SS History/Social Science

		Cum.	Cum.		
		Freq	Freq	Percent	Percent
253		1	1	0.04	0.04
264	F	5	6	0.18	0.22
274	FF	12	18	0.43	0.65
283	FFF	17	35	0.61	1.26
291	FFFF	27	62	0.97	2.23
298	FFFFF	28	90	1.01	3.23
306	FFFFFF	57	147	2.05	5.28
313	FFFFFFF	62	209	2.23	7.50
319	FFFFFFF	55	264	1.97	9.48
325	FFFFFFFF	87	351	3.12	12.60
331	FFFFFFFF	83	434	2.98	15.58
337	FFFFFFFF	94	528	3.37	18.95
343	FFFFFFFF	86	614	3.09	22.04
348	FFFFFFFF	120	734	4.31	26.35
354	FFFFFFFF	122	856	4.38	30.73
359	FFFFFFFF	114	970	4.09	34.82
365	FFFFFFFF	124	1094	4.45	39.27
370	FFFFFFFF	136	1230	4.88	44.15
376	FFFFFFFF	133	1363	4.77	48.92
382	FFFFFFFF	113	1476	4.06	52.98
388	FFFFFFFF	123	1599	4.41	57.39
393	FFFFFFFF	131	1730	4.70	62.10
400	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	124	1854	4.45	66.55
406	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	119	1973	4.27	70.82
413	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	134	2107	4.81	75.63
420	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	113	2220	4.06	79.68
428	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	95	2315	3.41	83.09
436	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	91	2406	3.27	86.36
444	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	95	2501	3.41	89.77
454	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	93	2594	3.34	93.11
465	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	66	2660	2.37	95.48
478	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	45	2705	1.62	97.09
495	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	43	2748	1.54	98.64
518	AAA	17	2765	0.61	99.25
554	AAAA	19	2784	0.68	99.93
600		2	2786	0.07	100.00

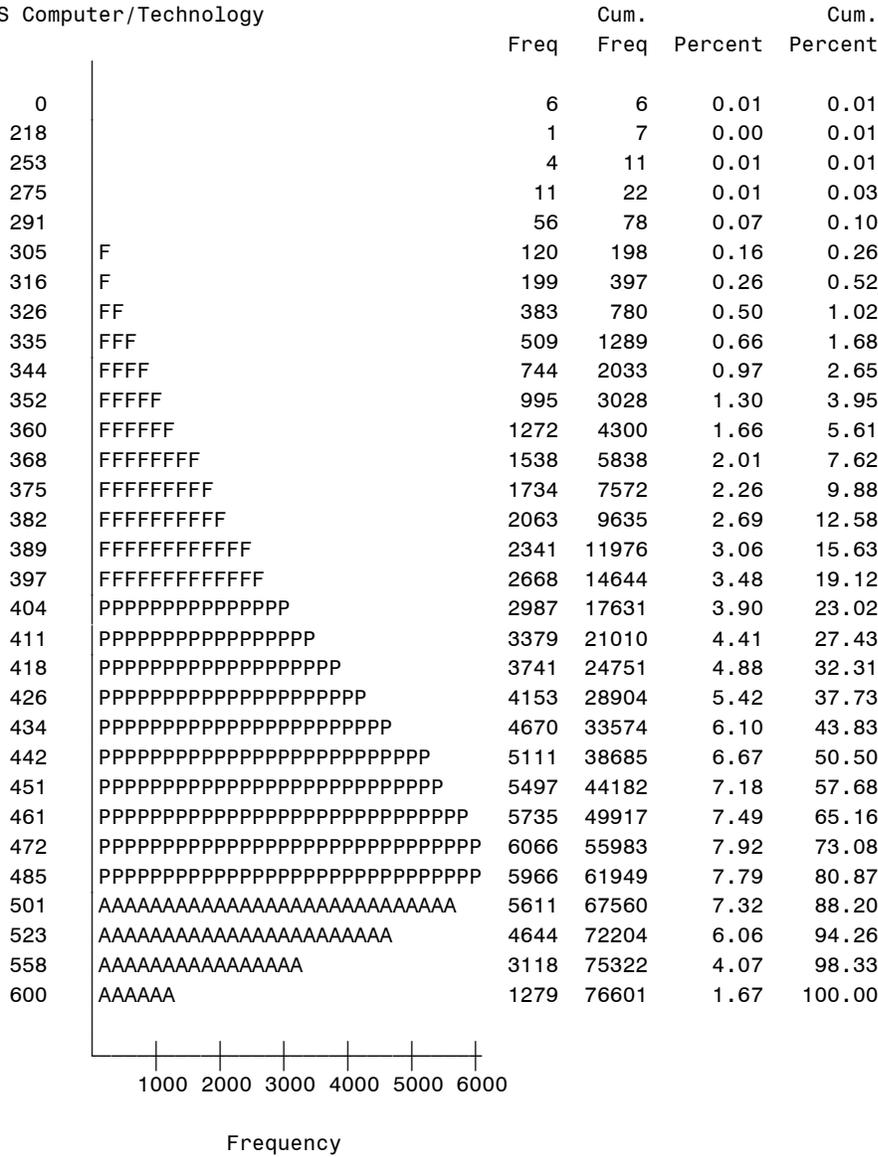


Grade 5 : Computer/Technology

Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Core 1

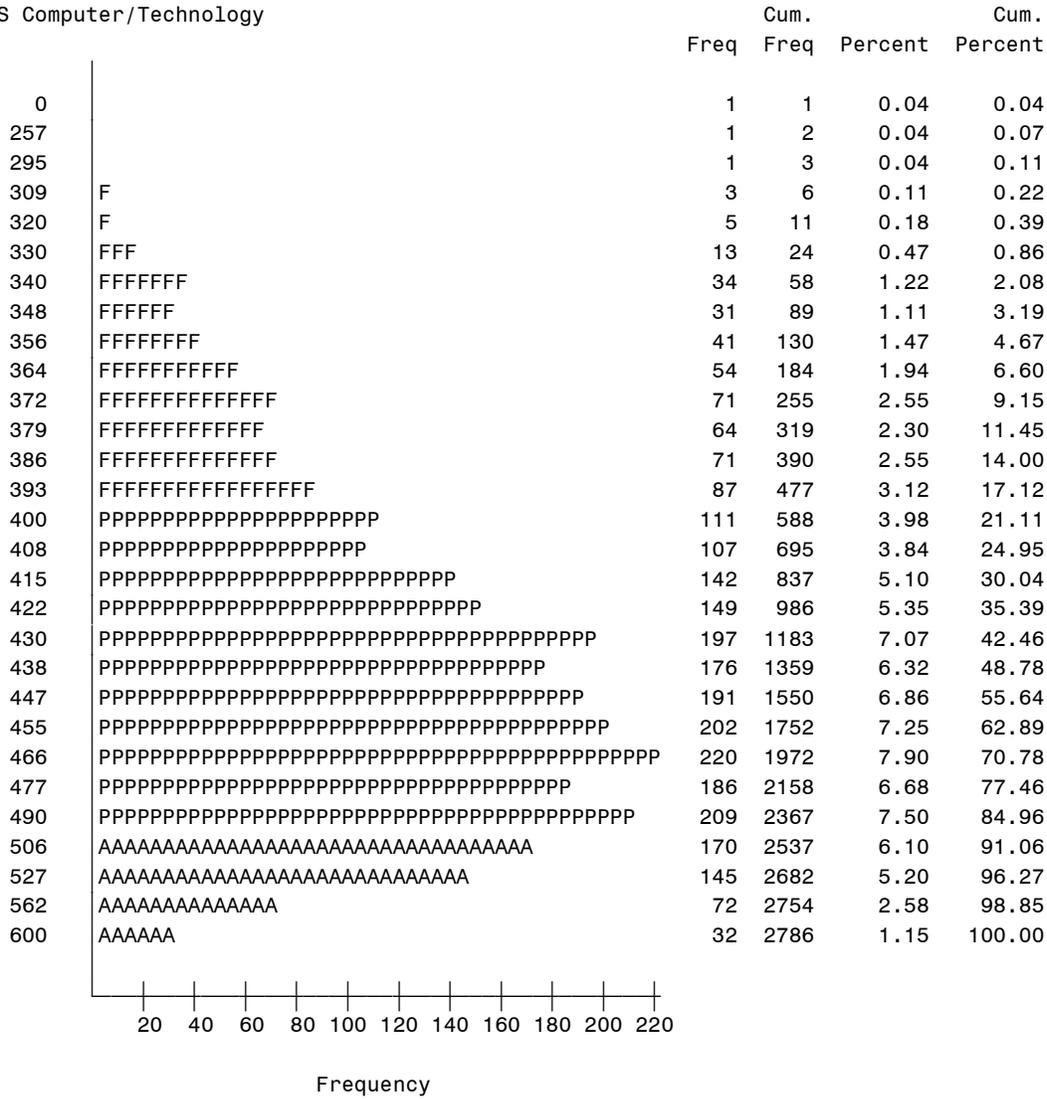
SS Computer/Technology



Grade 5 : Computer/Technology

Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced
Core 2

SS Computer/Technology



SS English: Reading/Lit. & Res.

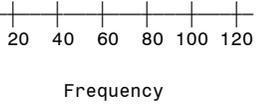
	Freq	Cum. Freq	Percent	Cum. Percent	
0	20	20	0.03	0.03	
102	1	21	0.00	0.03	
148	4	25	0.01	0.04	
177	5	30	0.01	0.05	
198	9	39	0.01	0.06	
214	20	59	0.03	0.09	
228	37	96	0.06	0.15	
241	F	71	167	0.11	0.25
252	F	138	305	0.21	0.46
262	FF	218	523	0.33	0.80
272	FFF	325	848	0.49	1.29
280	FFFF	393	1241	0.60	1.89
289	FFFFF	535	1776	0.81	2.70
297	FFFFFF	662	2438	1.01	3.71
304	FFFFFFF	773	3211	1.18	4.89
312	FFFFFFF	904	4115	1.38	6.26
319	FFFFFFF	954	5069	1.45	7.71
326	FFFFFFF	1152	6221	1.75	9.47
333	FFFFFFF	1149	7370	1.75	11.22
340	FFFFFFF	1238	8608	1.88	13.10
346	FFFFFFF	1394	10002	2.12	15.22
353	FFFFFFF	1425	11427	2.17	17.39
360	FFFFFFF	1492	12919	2.27	19.66
367	FFFFFFF	1654	14573	2.52	22.18
374	FFFFFFF	1832	16405	2.79	24.97
381	FFFFFFF	1857	18262	2.83	27.79
388	FFFFFFF	2055	20317	3.13	30.92
395	FFFFFFF	2161	22478	3.29	34.21
403	PPPPPPPPPPPPPPPPPPPPPP	2317	24795	3.53	37.73
411	PPPPPPPPPPPPPPPPPPPPPP	2644	27439	4.02	41.76
419	PPPPPPPPPPPPPPPPPPPPPP	2902	30341	4.42	46.17
427	PPPPPPPPPPPPPPPPPPPPPP	3160	33501	4.81	50.98
436	PPPPPPPPPPPPPPPPPPPPPP	3335	36836	5.08	56.06
446	PPPPPPPPPPPPPPPPPPPPPP	3655	40491	5.56	61.62
456	PPPPPPPPPPPPPPPPPPPPPP	3824	44315	5.82	67.44
468	PPPPPPPPPPPPPPPPPPPPPP	3932	48247	5.98	73.43
480	PPPPPPPPPPPPPPPPPPPPPP	3920	52167	5.97	79.39
495	PPPPPPPPPPPPPPPPPPPPPP	3880	56047	5.90	85.30
512	AAAAAAAAAAAAAAAAAAAAAAAA	3580	59627	5.45	90.74
534	AAAAAAAAAAAAAAAAAAAAAAAA	2841	62468	4.32	95.07
562	AAAAAAAAAAAAAAAAAAAA	1985	64453	3.02	98.09
581	AAAAAAAAAA	1009	65462	1.54	99.62
600	AA	247	65709	0.38	100.00

500 1000 1500 2000 2500 3000 3500

Frequency

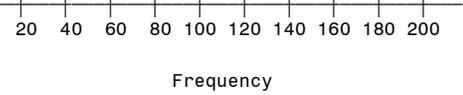
SS English: Reading/Lit. & Res.

		Cum.	Cum.
	Freq	Freq	Percent
0	2	2	0.10
200	1	3	0.05
215	1	4	0.05
227	F	6	0.30
238		2	0.10
248	FFFF	20	1.00
258	FFFF	18	0.90
267	FFFF	18	0.90
275	FFFFF	25	1.26
284	FFFF	18	0.90
291	FFFF	18	0.90
299	FFFFFF	31	1.56
306	FFFFFFF	37	1.86
313	FFFFFFF	33	1.66
320	FFFFFF	32	1.61
327	FFFFF	26	1.31
334	FFFFFF	31	1.56
341	FFFFFFFFF	48	2.41
348	FFFFFFF	36	1.81
356	FFFFFFFFF	43	2.16
363	FFFFFFFFF	44	2.21
370	FFFFFFFFF	42	2.11
377	FFFFFFFFFFFFF	68	3.42
384	FFFFFFFFFFFFF	69	3.47
391	FFFFFFFFFFFFF	72	3.62
400	PPPPPPPPPPPP	69	3.47
408	PPPPPPPPPPPPPP	82	4.12
416	PPPPPPPPPPPPPPPP	93	4.67
425	PPPPPPPPPPPPPPPPPP	104	5.22
435	PPPPPPPPPPPPPPPPPPPP	119	5.98
446	PPPPPPPPPPPPPPPPPPPPPP	127	6.38
457	PPPPPPPPPPPPPPPPPPPPPP	126	6.33
470	PPPPPPPPPPPPPPPPPPPPPP	120	6.03
484	PPPPPPPPPPPPPPPPPPPPPP	119	5.98
502	AAAAAAAAAAAAAAAAAAAA	103	5.17
523	AAAAAAAAAAAAAAAAAAAA	105	5.27
552	AAAAAAAAAA	48	2.41
599	AAAAA	27	1.36
600	AA	8	0.40



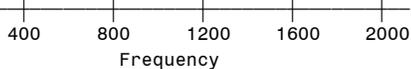
SS English: Reading/Lit. & Res.

	Freq	Cum. Freq	Percent	Cum. Percent	
0	2	2	0.06	0.06	
221	1	3	0.03	0.10	
236	2	5	0.06	0.16	
249	F	3	8	0.10	0.26
260	F	3	11	0.10	0.35
271	F	4	15	0.13	0.48
280	FF	8	23	0.26	0.74
289	FFF	15	38	0.48	1.22
298	FFF	17	55	0.55	1.77
306	FFFF	18	73	0.58	2.35
314	FFFF	22	95	0.71	3.06
322	FFFF	19	114	0.61	3.67
329	FFFFFF	36	150	1.16	4.83
337	FFFFFF	40	190	1.29	6.12
344	FFFFFF	51	241	1.64	7.76
351	FFFFFF	42	283	1.35	9.11
358	FFFFFF	55	338	1.77	10.89
365	FFFFFF	57	395	1.84	12.72
372	FFFFFF	65	460	2.09	14.81
379	FFFFFF	90	550	2.90	17.71
386	FFFFFF	95	645	3.06	20.77
393	FFFFFF	94	739	3.03	23.80
400	PPPPPPPPPPPPPPPPPPPP	105	844	3.38	27.18
408	PPPPPPPPPPPPPPPPPPPP	131	975	4.22	31.40
415	PPPPPPPPPPPPPPPPPPPP	142	1117	4.57	35.97
423	PPPPPPPPPPPPPPPPPPPP	144	1261	4.64	40.61
431	PPPPPPPPPPPPPPPPPPPP	131	1392	4.22	44.83
439	PPPPPPPPPPPPPPPPPPPP	159	1551	5.12	49.95
448	PPPPPPPPPPPPPPPPPPPP	216	1767	6.96	56.91
458	PPPPPPPPPPPPPPPPPPPP	176	1943	5.67	62.58
468	PPPPPPPPPPPPPPPPPPPP	175	2118	5.64	68.21
480	PPPPPPPPPPPPPPPPPPPP	190	2308	6.12	74.33
492	PPPPPPPPPPPPPPPPPPPP	174	2482	5.60	79.94
507	AAAAAAAAAAAAAAAAAAAAAAAA	165	2647	5.31	85.25
523	AAAAAAAAAAAAAAAAAAAAAAAA	156	2803	5.02	90.27
545	AAAAAAAAAAAAAAAAAAAAAAAA	124	2927	3.99	94.27
573	AAAAAAAAAAAAAAAAAAAA	97	3024	3.12	97.39
587	AAAAAAAAAAAA	59	3083	1.90	99.29
600	AAAA	22	3105	0.71	100.00

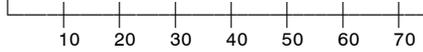


SS Mathematics

Score	Grade	Freq	Cum. Freq	Percent	Cum. Percent
0	F	65	65	0.10	0.10
160		18	83	0.03	0.13
195		10	93	0.02	0.14
216		10	103	0.02	0.16
232		2	105	0.00	0.16
244		5	110	0.01	0.17
254		2	112	0.00	0.17
263		5	117	0.01	0.18
271		7	124	0.01	0.19
278		17	141	0.03	0.21
284	F	27	168	0.04	0.26
291	F	69	237	0.11	0.36
296	FF	86	323	0.13	0.49
301	FFF	152	475	0.23	0.72
307	FFFF	191	666	0.29	1.01
312	FFFFF	280	946	0.43	1.44
316	FFFFFF	397	1343	0.60	2.04
321	FFFFFFF	518	1861	0.79	2.83
325	FFFFFFF	606	2467	0.92	3.75
329	FFFFFFF	716	3183	1.09	4.84
333	FFFFFFF	823	4006	1.25	6.10
337	FFFFFFF	897	4903	1.37	7.46
341	FFFFFFF	1011	5914	1.54	9.00
345	FFFFFFF	1050	6964	1.60	10.60
349	FFFFFFF	1078	8042	1.64	12.24
353	FFFFFFF	1141	9183	1.74	13.98
357	FFFFFFF	1254	10437	1.91	15.88
360	FFFFFFF	1338	11775	2.04	17.92
364	FFFFFFF	1359	13134	2.07	19.99
367	FFFFFFF	1357	14491	2.07	22.05
371	FFFFFFF	1413	15904	2.15	24.20
375	FFFFFFF	1496	17400	2.28	26.48
379	FFFFFFF	1509	18909	2.30	28.78
382	FFFFFFF	1582	20491	2.41	31.18
386	FFFFFFF	1548	22039	2.36	33.54
390	FFFFFFF	1644	23683	2.50	36.04
393	FFFFFFF	1757	25440	2.67	38.72
397	FFFFFFF	1719	27159	2.62	41.33
401	PPPPPP	1797	28956	2.73	44.07
405	PPPPPP	1739	30695	2.65	46.71
409	PPPPPP	1853	32548	2.82	49.53
413	PPPPPP	1872	34420	2.85	52.38
417	PPPPPP	1869	36289	2.84	55.23
421	PPPPPP	1892	38181	2.88	58.11
426	PPPPPP	2031	40212	3.09	61.20
431	PPPPPP	2034	42246	3.10	64.29
435	PPPPPP	2008	44254	3.06	67.35
440	PPPPPP	2039	46293	3.10	70.45
446	PPPPPP	2121	48414	3.23	73.68
451	PPPPPP	1996	50410	3.04	76.72
457	PPPPPP	1987	52397	3.02	79.74
464	PPPPPP	1994	54391	3.03	82.78
470	PPPPPP	1967	56358	2.99	85.77
478	PPPPPP	1878	58236	2.86	88.63
487	PPPPPP	1750	59986	2.66	91.29
497	PPPPPP	1617	61603	2.46	93.75
509	AAAAAAAA	1393	62996	2.12	95.87
524	AAAAAAAA	1126	64122	1.71	97.58
546	AAAAAAAA	814	64936	1.24	98.82
580	AAAAAAA	524	65460	0.80	99.62
600	AAAAA	249	65709	0.38	100.00

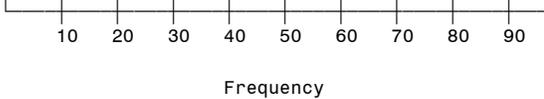


SS Mathematics		Freq	Cum. Freq	Percent	Cum. Percent
0	F	1	1	0.05	0.05
163	F	1	2	0.05	0.10
234	F	1	3	0.05	0.15
266	F	1	4	0.05	0.20
281	F	1	5	0.05	0.25
287	FF	4	9	0.20	0.45
294	FF	3	12	0.15	0.60
299	FFFF	8	20	0.40	1.00
304	FFF	5	25	0.25	1.26
310	FFFFFFF	17	42	0.85	2.11
315	FFFFFFF	20	62	1.00	3.11
319	FFFFFFFF	31	93	1.56	4.67
323	FFFFFFFF	24	117	1.21	5.88
328	FFFFFFFF	35	152	1.76	7.63
332	FFFFFFFF	37	189	1.86	9.49
336	FFFFFFFF	37	226	1.86	11.35
340	FFFFFFFF	34	260	1.71	13.06
344	FFFFFFFF	42	302	2.11	15.17
348	FFFFFFFF	50	352	2.51	17.68
351	FFFFFFFF	23	375	1.16	18.83
355	FFFFFFFF	41	416	2.06	20.89
359	FFFFFFFF	40	456	2.01	22.90
363	FFFFFFFF	38	494	1.91	24.81
367	FFFFFFFF	45	539	2.26	27.07
370	FFFFFFFF	52	591	2.61	29.68
374	FFFFFFFF	42	633	2.11	31.79
377	FFFFFFFF	50	683	2.51	34.30
381	FFFFFFFF	53	736	2.66	36.97
384	FFFFFFFF	40	776	2.01	38.98
388	FFFFFFFF	40	816	2.01	40.98
392	FFFFFFFF	53	869	2.66	43.65
396	FFFFFFFF	43	912	2.16	45.81
400	PPPPPP	55	967	2.76	48.57
403	PPPPPP	45	1012	2.26	50.83
407	PPPPPP	60	1072	3.01	53.84
411	PPPPPP	61	1133	3.06	56.91
415	PPPPPP	48	1181	2.41	59.32
419	PPPPPP	47	1228	2.36	61.68
423	PPPPPP	52	1280	2.61	64.29
428	PPPPPP	52	1332	2.61	66.90
433	PPPPPP	73	1405	3.67	70.57
437	PPPPPP	53	1458	2.66	73.23
442	PPPPPP	51	1509	2.56	75.79
448	PPPPPP	66	1575	3.31	79.11
453	PPPPPP	65	1640	3.26	82.37
459	PPPPPP	65	1705	3.26	85.64
466	PPPPPP	34	1739	1.71	87.34
472	PPPPPP	45	1784	2.26	89.60
480	PPPPPP	43	1827	2.16	91.76
489	PPPPPP	43	1870	2.16	93.92
499	AAAAAAAA	35	1905	1.76	95.68
511	AAAAAAAA	27	1932	1.36	97.04
526	AAAAAAAA	18	1950	0.90	97.94
547	AAAAAAAA	23	1973	1.16	99.10
582	AAAAAA	14	1987	0.70	99.80
600	AA	4	1991	0.20	100.00



SS Mathematics

		Freq	Cum. Freq	Percent	Cum. Percent
0	F	2	2	0.06	0.06
255	F	2	4	0.06	0.13
279	F	1	5	0.03	0.16
292	FF	3	8	0.10	0.26
298	FFFF	9	17	0.29	0.55
304	FFFF	8	25	0.26	0.81
309	FFFF	9	34	0.29	1.10
314	FFFFFF	12	46	0.39	1.48
319	FFFFFFFF	27	73	0.87	2.35
323	FFFFFFFF	17	90	0.55	2.90
328	FFFFFFFF	38	128	1.22	4.12
332	FFFFFFFF	29	157	0.93	5.06
337	FFFFFFFF	35	192	1.13	6.18
340	FFFFFFFF	42	234	1.35	7.54
345	FFFFFFFF	36	270	1.16	8.70
349	FFFFFFFF	49	319	1.58	10.27
353	FFFFFFFF	59	378	1.90	12.17
357	FFFFFFFF	61	439	1.96	14.14
360	FFFFFFFF	68	507	2.19	16.33
364	FFFFFFFF	74	581	2.38	18.71
368	FFFFFFFF	67	648	2.16	20.87
372	FFFFFFFF	69	717	2.22	23.09
375	FFFFFFFF	79	796	2.54	25.64
379	FFFFFFFF	85	881	2.74	28.37
383	FFFFFFFF	79	960	2.54	30.92
387	FFFFFFFF	89	1049	2.87	33.78
390	FFFFFFFF	84	1133	2.71	36.49
394	FFFFFFFF	90	1223	2.90	39.39
398	FFFFFFFF	95	1318	3.06	42.45
402	PPPPPP	83	1401	2.67	45.12
406	PPPPPP	68	1469	2.19	47.31
410	PPPPPP	78	1547	2.51	49.82
414	PPPPPP	82	1629	2.64	52.46
419	PPPPPP	76	1705	2.45	54.91
423	PPPPPP	74	1779	2.38	57.29
427	PPPPPP	79	1858	2.54	59.84
432	PPPPPP	94	1952	3.03	62.87
437	PPPPPP	76	2028	2.45	65.31
442	PPPPPP	81	2109	2.61	67.92
447	PPPPPP	74	2183	2.38	70.31
453	PPPPPP	89	2272	2.87	73.17
458	PPPPPP	68	2340	2.19	75.36
465	PPPPPP	90	2430	2.90	78.26
472	PPPPPP	75	2505	2.42	80.68
479	PPPPPP	93	2598	3.00	83.67
487	PPPPPP	94	2692	3.03	86.70
496	PPPPPP	94	2786	3.03	89.73
507	AAAAAAAA	92	2878	2.96	92.69
519	AAAAAAAA	80	2958	2.58	95.27
535	AAAAAAAA	64	3022	2.06	97.33
556	AAAAAAAA	48	3070	1.55	98.87
591	AAAAAAAA	28	3098	0.90	99.77
600	AAAA	7	3105	0.23	100.00



SS History/Social Science

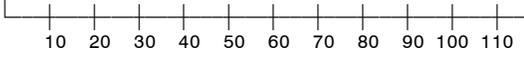
	Freq	Cum. Freq	Percent	Cum. Percent	
0	30	30	0.05	0.05	
97	2	32	0.00	0.05	
141	2	34	0.00	0.05	
168	1	35	0.00	0.05	
188	2	37	0.00	0.06	
204	3	40	0.00	0.06	
218	6	46	0.01	0.07	
230	11	57	0.02	0.09	
241	25	82	0.04	0.12	
250	F	60	142	0.09	0.22
260	FF	121	263	0.18	0.40
268	FFF	197	460	0.30	0.70
276	FFF	261	721	0.40	1.10
283	FFFFFF	428	1149	0.65	1.75
290	FFFFFFF	573	1722	0.87	2.62
297	FFFFFFF	738	2460	1.12	3.74
304	FFFFFFF	923	3383	1.40	5.15
310	FFFFFFF	1100	4483	1.67	6.82
316	FFFFFFF	1281	5764	1.95	8.77
322	FFFFFFF	1468	7232	2.23	11.01
328	FFFFFFF	1672	8904	2.54	13.55
334	FFFFFFF	1896	10800	2.89	16.44
340	FFFFFFF	2037	12837	3.10	19.54
345	FFFFFFF	2185	15022	3.33	22.86
351	FFFFFFF	2305	17327	3.51	26.37
357	FFFFFFF	2464	19791	3.75	30.12
362	FFFFFFF	2621	22412	3.99	34.11
368	FFFFFFF	2621	25033	3.99	38.10
373	FFFFFFF	2693	27726	4.10	42.20
379	FFFFFFF	2777	30503	4.23	46.42
384	FFFFFFF	2806	33309	4.27	50.69
390	FFFFFFF	2910	36219	4.43	55.12
396	FFFFFFF	2745	38964	4.18	59.30
402	PPPPPP	2799	41763	4.26	63.56
408	PPPPPP	2757	44520	4.20	67.75
414	PPPPPP	2537	47057	3.86	71.61
421	PPPPPP	2514	49571	3.83	75.44
428	PPPPPP	2262	51833	3.44	78.88
435	PPPPPP	2187	54020	3.33	82.21
442	PPPPPP	1987	56007	3.02	85.23
450	PPPPPP	1928	57935	2.93	88.17
458	PPPPPP	1682	59617	2.56	90.73
467	PPPPPP	1475	61092	2.24	92.97
477	PPPPPP	1254	62346	1.91	94.88
488	PPPPPP	1111	63457	1.69	96.57
501	AAAAAAA	795	64252	1.21	97.78
516	AAAAAAA	645	64897	0.98	98.76
535	AAAAA	422	65319	0.64	99.41
560	AAA	261	65580	0.40	99.80
580	A	100	65680	0.15	99.96
600		29	65709	0.04	100.00

600 1200 1800 2400

Frequency

SS History/Social Science

		Freq	Cum. Freq	Percent	Cum. Percent
0		1	1	0.05	0.05
198		1	2	0.05	0.10
213		1	3	0.05	0.15
226	F	3	6	0.15	0.30
237	F	2	8	0.10	0.40
247	F	2	10	0.10	0.50
256	F	3	13	0.15	0.65
264	FFF	8	21	0.40	1.05
271	FF	6	27	0.30	1.36
279	FFFFFF	14	41	0.70	2.06
286	FFFFFFFF	28	69	1.41	3.47
293	FFFFFFFFF	32	101	1.61	5.07
299	FFFFFFFFFFFF	41	142	2.06	7.13
305	FFFFFFFFFFFFF	35	177	1.76	8.89
311	FFFFFFFFFFFFFF	43	220	2.16	11.05
317	FFFFFFFFFFFFFFF	55	275	2.76	13.81
323	FFFFFFFFFFFFFFF	47	322	2.36	16.17
328	FFFFFFFFFFFFFFF	56	378	2.81	18.99
334	FFFFFFFFFFFFFFF	59	437	2.96	21.95
339	FFFFFFFFFFFFFFF	56	493	2.81	24.76
345	FFFFFFFFFFFFFFF	95	588	4.77	29.53
350	FFFFFFFFFFFFFFF	85	673	4.27	33.80
356	FFFFFFFFFFFFFFF	80	753	4.02	37.82
361	FFFFFFFFFFFFFFF	90	843	4.52	42.34
366	FFFFFFFFFFFFFFF	88	931	4.42	46.76
372	FFFFFFFFFFFFFFF	81	1012	4.07	50.83
377	FFFFFFFFFFFFFFF	80	1092	4.02	54.85
383	FFFFFFFFFFFFFFF	73	1165	3.67	58.51
388	FFFFFFFFFFFFFFF	71	1236	3.57	62.08
394	FFFFFFFFFFFFFFF	116	1352	5.83	67.91
400	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	74	1426	3.72	71.62
406	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	87	1513	4.37	75.99
412	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	69	1582	3.47	79.46
419	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	70	1652	3.52	82.97
425	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	59	1711	2.96	85.94
432	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	49	1760	2.46	88.40
440	PPPPPPPPPPPPPPPP	39	1799	1.96	90.36
447	PPPPPPPPPPPPPPPPPP	50	1849	2.51	92.87
456	PPPPPPPPPPPPPPPP	42	1891	2.11	94.98
465	PPPPPPPPPPPPPP	33	1924	1.66	96.63
474	PPPPPPPPPPPPPP	31	1955	1.56	98.19
485	PPPPP	12	1967	0.60	98.79
498	PPPPP	14	1981	0.70	99.50
514	AA	5	1986	0.25	99.75
532	A	2	1988	0.10	99.85
558		1	1989	0.05	99.90
579	A	2	1991	0.10	100.00



Frequency

SS History/Social Science	Freq	Cum. Freq	Percent	Cum. Percent
0	1	1	0.03	0.03
239	1	2	0.03	0.06
248	F	6	0.19	0.26
257	FF	11	0.35	0.61
265	FF	11	0.35	0.97
273	FFF	15	0.48	1.45
280	FFF	16	0.52	1.96
287	FFFFFF	32	1.03	3.00
294	FFFFFFF	40	1.29	4.28
300	FFFFFFF	47	1.51	5.80
306	FFFFFFF	57	1.84	7.63
312	FFFFFFFF	77	2.48	10.11
318	FFFFFFFF	58	1.87	11.98
324	FFFFFFFF	74	2.38	14.36
330	FFFFFFFF	72	2.32	16.68
336	FFFFFFFF	87	2.80	19.48
342	FFFFFFFF	100	3.22	22.71
347	FFFFFFFF	80	2.58	25.28
353	FFFFFFFF	94	3.03	28.31
359	FFFFFFFF	119	3.83	32.14
365	FFFFFFFF	119	3.83	35.97
370	FFFFFFFF	127	4.09	40.06
376	FFFFFFFF	115	3.70	43.77
381	FFFFFFFF	106	3.41	47.18
387	FFFFFFFF	124	3.99	51.18
394	FFFFFFFF	115	3.70	54.88
400	PPPPPP	115	3.70	58.58
406	PPPPPP	119	3.83	62.42
412	PPPPPP	100	3.22	65.64
419	PPPPPP	127	4.09	69.73
426	PPPPPP	106	3.41	73.14
434	PPPPPP	121	3.90	77.04
442	PPPPPP	122	3.93	80.97
450	PPPPPP	102	3.29	84.25
459	PPPPPP	97	3.12	87.38
469	PPPPPP	91	2.93	90.31
479	PPPPPP	96	3.09	93.40
491	PPPPPP	57	1.84	95.23
504	AAAAAAA	47	1.51	96.75
520	AAAAAAA	41	1.32	98.07
539	AAAAA	28	0.90	98.97
566	AAAA	21	0.68	99.65
583	AA	8	0.26	99.90
600	A	3	0.10	100.00

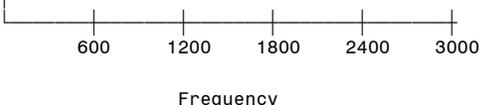
Grade 8 : Science

Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Core 1

SS Science

		Freq	Cum. Freq	Percent	Cum. Percent
0		34	34	0.05	0.05
187		4	38	0.01	0.06
223		2	40	0.00	0.06
244		1	41	0.00	0.06
260		4	45	0.01	0.07
273		4	49	0.01	0.07
284		5	54	0.01	0.08
293		15	69	0.02	0.11
301		18	87	0.03	0.13
309	F	43	130	0.07	0.20
316	F	82	212	0.12	0.32
322	FF	135	347	0.21	0.53
329	FFF	192	539	0.29	0.82
335	FFF	227	766	0.35	1.17
340	FFFFF	340	1106	0.52	1.68
345	FFFFFF	426	1532	0.65	2.33
351	FFFFFFF	524	2056	0.80	3.13
356	FFFFFFF	661	2717	1.01	4.13
360	FFFFFFF	811	3528	1.23	5.37
365	FFFFFFF	920	4448	1.40	6.77
370	FFFFFFF	1025	5473	1.56	8.33
375	FFFFFFF	1109	6582	1.69	10.02
379	FFFFFFF	1344	7926	2.05	12.06
384	FFFFFFF	1451	9377	2.21	14.27
388	FFFFFFF	1523	10900	2.32	16.59
393	FFFFFFF	1769	12669	2.69	19.28
397	FFFFFFF	1814	14483	2.76	22.04
402	PPPPPPPPPPPPPPPPPPPPPPPP	1864	16347	2.84	24.88
406	PPPPPPPPPPPPPPPPPPPPPPPP	2109	18456	3.21	28.09
411	PPPPPPPPPPPPPPPPPPPPPPPP	2195	20651	3.34	31.43
415	PPPPPPPPPPPPPPPPPPPPPPPP	2367	23018	3.60	35.03
420	PPPPPPPPPPPPPPPPPPPPPPPP	2437	25455	3.71	38.74
425	PPPPPPPPPPPPPPPPPPPPPPPP	2588	28043	3.94	42.68
430	PPPPPPPPPPPPPPPPPPPPPPPP	2678	30721	4.08	46.75
435	PPPPPPPPPPPPPPPPPPPPPPPP	2636	33357	4.01	50.76
440	PPPPPPPPPPPPPPPPPPPPPPPP	2775	36132	4.22	54.99
445	PPPPPPPPPPPPPPPPPPPPPPPP	2862	38994	4.36	59.34
451	PPPPPPPPPPPPPPPPPPPPPPPP	2832	41826	4.31	63.65
456	PPPPPPPPPPPPPPPPPPPPPPPP	2972	44798	4.52	68.18
462	PPPPPPPPPPPPPPPPPPPPPPPP	2894	47692	4.40	72.58
469	PPPPPPPPPPPPPPPPPPPPPPPP	2857	50549	4.35	76.93
476	PPPPPPPPPPPPPPPPPPPPPPPP	2767	53316	4.21	81.14
483	PPPPPPPPPPPPPPPPPPPPPPPP	2669	55985	4.06	85.20
491	PPPPPPPPPPPPPPPPPPPPPPPP	2461	58446	3.75	88.95
501	AAAAAAAAAAAAAAAAAAAAAAAA	2102	60548	3.20	92.15
511	AAAAAAAAAAAAAAAAAAAAAAAA	1841	62389	2.80	94.95
524	AAAAAAAAAAAAAAAAAAAAAAAA	1381	63770	2.10	97.05
539	AAAAAAAAAAAA	1003	64773	1.53	98.58
560	AAAAAAA	614	65387	0.93	99.51
596	AAAA	269	65656	0.41	99.92
600	A	53	65709	0.08	100.00



SS Science

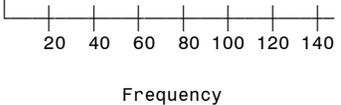
		Freq	Cum. Freq	Percent	Cum. Percent
0	F	2	2	0.10	0.10
271	F	1	3	0.05	0.15
307	F	2	5	0.10	0.25
314	FFF	6	11	0.30	0.55
320	FFFFF	10	21	0.50	1.05
327	FFFFFFF	11	32	0.55	1.61
333	FFFFFFF	11	43	0.55	2.16
338	FFFFFFF	16	59	0.80	2.96
343	FFFFFFF	22	81	1.10	4.07
348	FFFFFFF	26	107	1.31	5.37
353	FFFFFFF	33	140	1.66	7.03
358	FFFFFFF	26	166	1.31	8.34
363	FFFFFFF	31	197	1.56	9.89
367	FFFFFFF	37	234	1.86	11.75
372	FFFFFFF	32	266	1.61	13.36
377	FFFFFFF	49	315	2.46	15.82
381	FFFFFFF	44	359	2.21	18.03
386	FFFFFFF	61	420	3.06	21.09
390	FFFFFFF	47	467	2.36	23.46
394	FFFFFFF	54	521	2.71	26.17
399	FFFFFFF	58	579	2.91	29.08
403	PPPPPP	65	644	3.26	32.35
408	PPPPPP	76	720	3.82	36.16
413	PPPPPP	65	785	3.26	39.43
417	PPPPPP	86	871	4.32	43.75
422	PPPPPP	64	935	3.21	46.96
427	PPPPPP	86	1021	4.32	51.28
432	PPPPPP	75	1096	3.77	55.05
437	PPPPPP	90	1186	4.52	59.57
442	PPPPPP	85	1271	4.27	63.84
447	PPPPPP	79	1350	3.97	67.81
453	PPPPPP	75	1425	3.77	71.57
460	PPPPPP	82	1507	4.12	75.69
466	PPPPPP	83	1590	4.17	79.86
473	PPPPPP	87	1677	4.37	84.23
480	PPPPPP	60	1737	3.01	87.24
489	PPPPPP	55	1792	2.76	90.01
498	PPPPPP	60	1852	3.01	93.02
509	AAAAAAAA	42	1894	2.11	95.13
521	AAAAAAAA	42	1936	2.11	97.24
537	AAAAAAAA	26	1962	1.31	98.54
558	AAAAAAAA	19	1981	0.95	99.50
594	AAAA	7	1988	0.35	99.85
600	AA	3	1991	0.15	100.00

Grade 8 : Science

Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced
Core 3

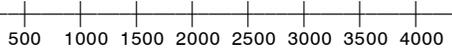
SS Science

		Freq	Cum. Freq	Percent	Cum. Percent
0	F	3	3	0.10	0.10
245		1	4	0.03	0.13
258		1	5	0.03	0.16
288	F	4	9	0.13	0.29
296	F	3	12	0.10	0.39
303		2	14	0.06	0.45
310	F	5	19	0.16	0.61
316	F	3	22	0.10	0.71
323	F	5	27	0.16	0.87
329	F	7	34	0.23	1.10
334	FFF	16	50	0.52	1.61
339	FFFFF	24	74	0.77	2.38
345	FFFFF	27	101	0.87	3.25
350	FFFFFFF	35	136	1.13	4.38
355	FFFFFFF	33	169	1.06	5.44
359	FFFFFFFFFF	43	212	1.38	6.83
364	FFFFFFFFFF	41	253	1.32	8.15
369	FFFFFFFFFFFF	67	320	2.16	10.31
374	FFFFFFFFFFFF	52	372	1.67	11.98
378	FFFFFFFFFFFFF	69	441	2.22	14.20
383	FFFFFFFFFFFFFFF	85	526	2.74	16.94
387	FFFFFFFFFFFFFFF	71	597	2.29	19.23
392	FFFFFFFFFFFFFFF	92	689	2.96	22.19
397	FFFFFFFFFFFFFFF	90	779	2.90	25.09
401	PPPPPPPPPPPPPPPP	96	875	3.09	28.18
406	PPPPPPPPPPPPPPPP	89	964	2.87	31.05
410	PPPPPPPPPPPPPPPPPP	123	1087	3.96	35.01
415	PPPPPPPPPPPPPPPP	97	1184	3.12	38.13
420	PPPPPPPPPPPPPPPPPP	119	1303	3.83	41.96
425	PPPPPPPPPPPPPPPPPP	108	1411	3.48	45.44
430	PPPPPPPPPPPPPPPPPP	113	1524	3.64	49.08
436	PPPPPPPPPPPPPPPPPP	129	1653	4.15	53.24
441	PPPPPPPPPPPPPPPPPP	110	1763	3.54	56.78
447	PPPPPPPPPPPPPPPPPP	114	1877	3.67	60.45
454	PPPPPPPPPPPPPPPPPP	143	2020	4.61	65.06
460	PPPPPPPPPPPPPPPPPP	129	2149	4.15	69.21
467	PPPPPPPPPPPPPPPPPP	144	2293	4.64	73.85
474	PPPPPPPPPPPPPPPPPP	130	2423	4.19	78.04
482	PPPPPPPPPPPPPPPPPP	114	2537	3.67	81.71
492	PPPPPPPPPPPPPPPPPP	125	2662	4.03	85.73
503	AAAAAAAAAAAAAAAAAAAA	124	2786	3.99	89.73
515	AAAAAAAAAAAAAAAAAAAA	116	2902	3.74	93.46
531	AAAAAAAAAAAAAAAAAAAA	95	2997	3.06	96.52
552	AAAAAAAAAAAA	63	3060	2.03	98.55
588	AAAAAA	29	3089	0.93	99.48
600	AAA	16	3105	0.52	100.00



SS Computer/Technology

	Freq	Cum. Freq	Percent	Cum. Percent
0	28	28	0.04	0.04
134	2	30	0.00	0.05
176	5	35	0.01	0.05
201	2	37	0.00	0.06
220	9	46	0.01	0.07
234	14	60	0.02	0.09
248	26	86	0.04	0.13
259 F	50	136	0.08	0.21
269 F	90	226	0.14	0.34
279 F	132	358	0.20	0.54
288 FF	208	566	0.32	0.86
296 FFF	253	819	0.39	1.25
304 FFFF	398	1217	0.61	1.85
312 FFFF	423	1640	0.64	2.50
319 FFFFF	520	2160	0.79	3.29
326 FFFFFF	645	2805	0.98	4.27
333 FFFFFFF	715	3520	1.09	5.36
340 FFFFFFFF	899	4419	1.37	6.73
347 FFFFFFFF	1003	5422	1.53	8.25
354 FFFFFFFF	1203	6625	1.83	10.08
360 FFFFFFFF	1358	7983	2.07	12.15
367 FFFFFFFF	1616	9599	2.46	14.61
374 FFFFFFFF	1770	11369	2.69	17.30
380 FFFFFFFF	2092	13461	3.18	20.49
387 FFFFFFFF	2351	15812	3.58	24.06
394 FFFFFFFF	2790	18602	4.25	28.31
401 P	3036	21638	4.62	32.93
409 P	3308	24946	5.03	37.96
416 P	3551	28497	5.40	43.37
424 P	3856	32353	5.87	49.24
432 P	4128	36481	6.28	55.52
441 P	4298	40779	6.54	62.06
450 P	4334	45113	6.60	68.66
460 P	4321	49434	6.58	75.23
471 P	4210	53644	6.41	81.64
484 P	3857	57501	5.87	87.51
499 A	3220	60721	4.90	92.41
517 A	2484	63205	3.78	96.19
541 A	1557	64762	2.37	98.56
582 A	745	65507	1.13	99.69
600 A	202	65709	0.31	100.00



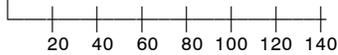
Frequency

Grade 8 : Computer/Technology

Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced
Core 2

SS Computer/Technology

		Freq	Cum. Freq	Percent	Cum. Percent
0		2	2	0.10	0.10
128		1	3	0.05	0.15
214		1	4	0.05	0.20
229		1	5	0.05	0.25
242	F	5	10	0.25	0.50
253	F	6	16	0.30	0.80
264	F	4	20	0.20	1.00
274	FF	10	30	0.50	1.51
282	FFF	13	43	0.65	2.16
291	FFF	16	59	0.80	2.96
298	FFFF	19	78	0.95	3.92
306	FFFFF	26	104	1.31	5.22
313	FFFFF	22	126	1.10	6.33
320	FFFFF	25	151	1.26	7.58
327	FFFFF	27	178	1.36	8.94
334	FFFFF	28	206	1.41	10.35
341	FFFF	21	227	1.05	11.40
347	FFFFF	27	254	1.36	12.76
354	FFFFF	35	289	1.76	14.52
360	FFFFF	41	330	2.06	16.57
367	FFFFF	56	386	2.81	19.39
374	FFFFF	58	444	2.91	22.30
380	FFFFF	69	513	3.47	25.77
387	FFFFF	71	584	3.57	29.33
394	FFFFF	103	687	5.17	34.51
401	PPPPPPPPPPPPPPPPPPPPPP	113	800	5.68	40.18
408	PPPPPPPPPPPPPPPPPPPPPP	121	921	6.08	46.26
416	PPPPPPPPPPPPPPPPPPPPPP	136	1057	6.83	53.09
424	PPPPPPPPPPPPPPPPPPPPPP	128	1185	6.43	59.52
432	PPPPPPPPPPPPPPPPPPPPPP	138	1323	6.93	66.45
442	PPPPPPPPPPPPPPPPPPPPPP	136	1459	6.83	73.28
452	PPPPPPPPPPPPPPPPPPPPPP	134	1593	6.73	80.01
463	PPPPPPPPPPPPPPPPPPPPPP	114	1707	5.73	85.74
475	PPPPPPPPPPPPPPPPPPPPPP	102	1809	5.12	90.86
490	PPPPPPPPPPPPPP	77	1886	3.87	94.73
508	AAAAAAAAAA	56	1942	2.81	97.54
533	AAAAAAA	35	1977	1.76	99.30
574	AA	9	1986	0.45	99.75
600	A	5	1991	0.25	100.00



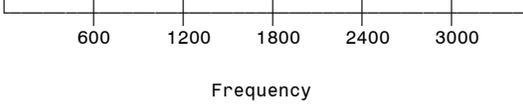
Frequency

SS Computer/Technology

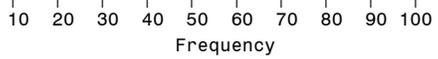
		Freq	Cum. Freq	Percent	Cum. Percent
0	F	3	3	0.10	0.10
218		1	4	0.03	0.13
234		2	6	0.06	0.19
247		1	7	0.03	0.23
258		1	8	0.03	0.26
268		1	9	0.03	0.29
278	F	5	14	0.16	0.45
287	FFF	15	29	0.48	0.93
296	FFFF	22	51	0.71	1.64
304	FFFF	20	71	0.64	2.29
312	FFFF	19	90	0.61	2.90
320	FFFFF	23	113	0.74	3.64
327	FFFFFF	34	147	1.10	4.73
334	FFFFF	27	174	0.87	5.60
341	FFFFFF	31	205	1.00	6.60
348	FFFFFFF	45	250	1.45	8.05
355	FFFFFFF	48	298	1.55	9.60
362	FFFFFFF	57	355	1.84	11.43
369	FFFFFFF	68	423	2.19	13.62
376	FFFFFFF	65	488	2.09	15.72
383	FFFFFFF	94	582	3.03	18.74
390	FFFFFFF	100	682	3.22	21.96
397	FFFFFFF	106	788	3.41	25.38
405	PPPPPPPPPPPPPPPPPP	102	890	3.29	28.66
412	PPPPPPPPPPPPPPPPPP	111	1001	3.57	32.24
420	PPPPPPPPPPPPPPPPPP	97	1098	3.12	35.36
428	PPPPPPPPPPPPPPPPPP	142	1240	4.57	39.94
437	PPPPPPPPPPPPPPPPPP	150	1390	4.83	44.77
445	PPPPPPPPPPPPPPPPPP	165	1555	5.31	50.08
455	PPPPPPPPPPPPPPPPPP	159	1714	5.12	55.20
466	PPPPPPPPPPPPPPPPPP	177	1891	5.70	60.90
477	PPPPPPPPPPPPPPPPPP	195	2086	6.28	67.18
490	PPPPPPPPPPPPPPPPPP	196	2282	6.31	73.49
505	AA	216	2498	6.96	80.45
524	AA	201	2699	6.47	86.92
549	AA	204	2903	6.57	93.49
590	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	148	3051	4.77	98.26
600	AAAAAAAA	54	3105	1.74	100.00

Frequency

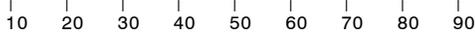
Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0	F	46	46	0.08	0.08
147		3	49	0.01	0.09
190		1	50	0.00	0.09
216		3	53	0.01	0.10
236		6	59	0.01	0.11
252		20	79	0.04	0.14
266		29	108	0.05	0.19
277	F	41	149	0.07	0.27
288	F	102	251	0.18	0.45
298	FF	127	378	0.23	0.68
306	FFF	197	575	0.36	1.04
315	FFFF	305	880	0.55	1.59
322	FFFFF	393	1273	0.71	2.29
330	FFFFFF	459	1732	0.83	3.12
337	FFFFFFF	633	2365	1.14	4.26
344	FFFFFFF	710	3075	1.28	5.54
350	FFFFFFF	791	3866	1.43	6.97
356	FFFFFFF	935	4801	1.69	8.65
363	FFFFFFF	973	5774	1.75	10.41
369	FFFFFFF	1040	6814	1.87	12.28
375	FFFFFFF	1138	7952	2.05	14.34
381	FFFFFFF	1244	9196	2.24	16.58
387	FFFFFFF	1335	10531	2.41	18.98
393	FFFFFFF	1467	11998	2.64	21.63
399	FFFFFFF	1558	13556	2.81	24.44
405	PPPPPPPPPPPPPPPPPPPPPP	1686	15242	3.04	27.48
412	PPPPPPPPPPPPPPPPPPPPPP	1897	17139	3.42	30.90
418	PPPPPPPPPPPPPPPPPPPPPP	1924	19063	3.47	34.37
424	PPPPPPPPPPPPPPPPPPPPPP	2167	21230	3.91	38.27
431	PPPPPPPPPPPPPPPPPPPPPP	2257	23487	4.07	42.34
438	PPPPPPPPPPPPPPPPPPPPPP	2476	25963	4.46	46.80
445	PPPPPPPPPPPPPPPPPPPPPP	2622	28585	4.73	51.53
453	PPPPPPPPPPPPPPPPPPPPPP	2934	31519	5.29	56.82
461	PPPPPPPPPPPPPPPPPPPPPP	3107	34626	5.60	62.42
469	PPPPPPPPPPPPPPPPPPPPPP	3201	37827	5.77	68.19
479	PPPPPPPPPPPPPPPPPPPPPP	3378	41205	6.09	74.28
490	PPPPPPPPPPPPPPPPPPPPPP	3418	44623	6.16	80.44
501	AA	3168	47791	5.71	86.15
515	AA	2930	50721	5.28	91.44
533	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	2314	53035	4.17	95.61
557	AAAAAAAAAAAAAAAA	1495	54530	2.70	98.30
596	AAAAAAAA	761	55291	1.37	99.68
600	AA	180	55471	0.32	100.00



Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
254		1	1	0.05	0.05
267	F	2	3	0.10	0.15
279	FF	5	8	0.24	0.39
289		1	9	0.05	0.44
299	FFFFFFF	18	27	0.87	1.31
307	FFFFFFFFF	24	51	1.16	2.47
315	FFFFFFF	15	66	0.73	3.19
323	FFFFFFFFF	26	92	1.26	4.45
330	FFFFFFFFFFFFFFF	42	134	2.03	6.48
337	FFFFFFFFFFFFFFF	43	177	2.08	8.56
344	FFFFFFFFFFFFFFF	45	222	2.18	10.74
350	FFFFFFFFFFFFFFF	48	270	2.32	13.06
357	FFFFFFFFFFFFFFF	50	320	2.42	15.48
363	FFFFFFFFFFFFFFF	48	368	2.32	17.80
369	FFFFFFFFFFFFFFF	50	418	2.42	20.22
375	FFFFFFFFFFFFFFF	63	481	3.05	23.27
381	FFFFFFFFFFFFFFF	63	544	3.05	26.32
387	FFFFFFFFFFFFFFF	57	601	2.76	29.08
393	FFFFFFFFFFFFFFF	65	666	3.14	32.22
399	FFFFFFFFFFFFFFF	58	724	2.81	35.03
405	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	84	808	4.06	39.09
411	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	95	903	4.60	43.69
417	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	72	975	3.48	47.17
423	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	104	1079	5.03	52.20
430	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	84	1163	4.06	56.27
437	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	89	1252	4.31	60.57
444	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	99	1351	4.79	65.36
451	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	100	1451	4.84	70.20
459	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	105	1556	5.08	75.28
468	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	99	1655	4.79	80.07
477	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	107	1762	5.18	85.24
488	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	97	1859	4.69	89.94
499	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	87	1946	4.21	94.15
513	AAAAAAAAAAAAAAAA	42	1988	2.03	96.18
531	AAAAAAAAAAAAAAAA	46	2034	2.23	98.40
554	AAAAAAA	21	2055	1.02	99.42
593	AAA	8	2063	0.39	99.81
600	AA	4	2067	0.19	100.00

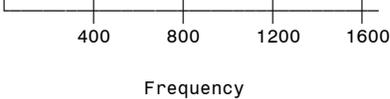


Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
257	F	1	1	0.06	0.06
280	F	1	2	0.06	0.12
290	F	1	3	0.06	0.18
298	FF	4	7	0.25	0.43
306	FFFFF	9	16	0.55	0.98
313	FFFFFF	12	28	0.74	1.72
320	FFFF	8	36	0.49	2.21
326	FFFFFFF	14	50	0.86	3.06
332	FFFFFFFFFFFF	26	76	1.59	4.66
338	FFFFFFFFFFFFF	27	103	1.65	6.31
343	FFFFFFFFFFFFFFFF	40	143	2.45	8.76
349	FFFFFFFFFFFFFFFF	33	176	2.02	10.78
354	FFFFFFFFFFFFFFFFFFFF	56	232	3.43	14.22
359	FFFFFFFFFFFFFFFFFFFFFF	61	293	3.74	17.95
365	FFFFFFFFFFFFFFFFFFFFF	54	347	3.31	21.26
370	FFFFFFFFFFFFFFFFFFFFFFF	70	417	4.29	25.55
374	FFFFFFFFFFFFFFFFFFFFFFF	54	471	3.31	28.86
380	FFFFFFFFFFFFFFFFFFFFFFF	70	541	4.29	33.15
384	FFFFFFFFFFFFFFFFFFFFFFF	69	610	4.23	37.38
389	FFFFFFFFFFFFFFFFFFFFFFF	74	684	4.53	41.91
394	FFFFFFFFFFFFFFFFFFFFFFF	83	767	5.09	47.00
399	FFFFFFFFFFFFFFFFFFFFFFF	67	834	4.11	51.10
404	PP	90	924	5.51	56.62
410	PP	66	990	4.04	60.66
415	PP	84	1074	5.15	65.81
420	PP	60	1134	3.68	69.49
426	PP	77	1211	4.72	74.20
431	PP	46	1257	2.82	77.02
437	PP	48	1305	2.94	79.96
443	PP	70	1375	4.29	84.25
450	PP	43	1418	2.63	86.89
457	PP	45	1463	2.76	89.64
465	PP	39	1502	2.39	92.03
473	PP	43	1545	2.63	94.67
483	PP	27	1572	1.65	96.32
493	PP	20	1592	1.23	97.55
506	AAAAAAA	13	1605	0.80	98.35
521	AAAAAA	11	1616	0.67	99.02
542	AAAA	7	1623	0.43	99.45
578	AAA	5	1628	0.31	99.75
600	AA	4	1632	0.25	100.00

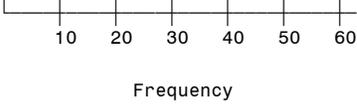


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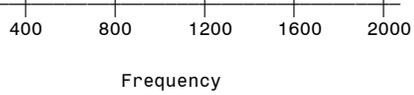
Scale Score	Freq	Cum. Freq	Percent	Cum. Percent	
0	6	6	0.01	0.01	
203	1	7	0.00	0.02	
222	8	15	0.02	0.04	
237	1	16	0.00	0.04	
249	13	29	0.03	0.07	
260	13	42	0.03	0.10	
269	21	63	0.05	0.15	
278	F	58	121	0.14	0.28
286	FF	106	227	0.25	0.53
293	FFF	169	396	0.39	0.92
300	FFFF	248	644	0.58	1.50
307	FFFFF	312	956	0.73	2.23
313	FFFFFF	439	1395	1.02	3.26
319	FFFFFFF	533	1928	1.24	4.50
324	FFFFFFF	619	2547	1.44	5.94
330	FFFFFFF	735	3282	1.72	7.66
335	FFFFFFF	851	4133	1.99	9.65
341	FFFFFFF	944	5077	2.20	11.85
346	FFFFFFF	1057	6134	2.47	14.32
351	FFFFFFF	1126	7260	2.63	16.94
356	FFFFFFF	1252	8512	2.92	19.87
361	FFFFFFF	1289	9801	3.01	22.88
366	FFFFFFF	1363	11164	3.18	26.06
371	FFFFFFF	1459	12623	3.41	29.46
376	FFFFFFF	1545	14168	3.61	33.07
381	FFFFFFF	1472	15640	3.44	36.50
386	FFFFFFF	1578	17218	3.68	40.19
391	FFFFFFF	1598	18816	3.73	43.92
396	FFFFFFF	1565	20381	3.65	47.57
401	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1629	22010	3.80	51.37
407	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1521	23531	3.55	54.92
412	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1610	25141	3.76	58.68
417	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1559	26700	3.64	62.32
423	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1544	28244	3.60	65.92
429	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1477	29721	3.45	69.37
435	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1413	31134	3.30	72.67
441	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1430	32564	3.34	76.00
448	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1330	33894	3.10	79.11
455	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1335	35229	3.12	82.22
463	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1252	36481	2.92	85.15
471	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1223	37704	2.85	88.00
480	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1079	38783	2.52	90.52
491	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1016	39799	2.37	92.89
502	AAAAAAAAAAAAAAAA	879	40678	2.05	94.94
516	AAAAAAAAAAAA	720	41398	1.68	96.62
534	AAAAAAAAAAAA	622	42020	1.45	98.07
558	AAAAAAAA	461	42481	1.08	99.15
598	AAAAA	263	42744	0.61	99.76
600	AA	101	42845	0.24	100.00



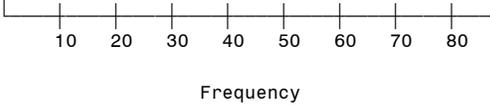
Scale Score		Cum. Freq	Cum. Freq	Percent	Cum. Percent
208	F	1	1	0.07	0.07
261	FFFF	7	8	0.51	0.59
269	FF	3	11	0.22	0.81
276	FFFF	7	18	0.51	1.32
283	FFFF	8	26	0.59	1.90
289	FFFFFFFF	21	47	1.54	3.44
295	FFFFFFFF	18	65	1.32	4.76
300	FFFFFFFFFFFFFF	29	94	2.12	6.89
307	FFFFFFFFFFFFFFFF	44	138	3.22	10.11
311	FFFFFFFFFFFFFFFF	49	187	3.59	13.70
317	FFFFFFFFFFFFFFFF	53	240	3.88	17.58
322	FFFFFFFFFFFFFFFF	61	301	4.47	22.05
327	FFFFFFFFFFFFFFFF	59	360	4.32	26.37
332	FFFFFFFFFFFFFF	44	404	3.22	29.60
337	FFFFFFFFFFFFFFFF	61	465	4.47	34.07
342	FFFFFFFFFFFFFF	51	516	3.74	37.80
346	FFFFFFFFFFFFFF	59	575	4.32	42.12
351	FFFFFFFFFFFFFF	44	619	3.22	45.35
356	FFFFFFFFFFFFFF	49	668	3.59	48.94
361	FFFFFFFFFFFFFF	50	718	3.66	52.60
366	FFFFFFFFFFFFFF	57	775	4.18	56.78
371	FFFFFFFFFFFFFF	49	824	3.59	60.37
376	FFFFFFFFFFFFFF	45	869	3.30	63.66
381	FFFFFFFFFFFFFF	50	919	3.66	67.33
386	FFFFFFFFFFFF	34	953	2.49	69.82
390	FFFFFFFFFFFF	43	996	3.15	72.97
396	FFFFFFFFFFFF	38	1034	2.78	75.75
402	PPPPPPPPPPPP	33	1067	2.42	78.17
407	PPPPPPPPPPPP	37	1104	2.71	80.88
413	PPPPPPPPPPPP	37	1141	2.71	83.59
419	PPPPPPPPPPPP	39	1180	2.86	86.45
426	PPPPPPPPPP	26	1206	1.90	88.35
432	PPPPPPPPPPPP	32	1238	2.34	90.70
440	PPPPPPPPPPPP	26	1264	1.90	92.60
448	PPPPPPPPPPPP	28	1292	2.05	94.65
457	PPPPPPPPPP	19	1311	1.39	96.04
467	PPPPPPPPPP	20	1331	1.47	97.51
479	PPPPPPPP	13	1344	0.95	98.46
493	PPPPPPPP	13	1357	0.95	99.41
510	AAA	5	1362	0.37	99.78
534	A	2	1364	0.15	99.93
573	A	1	1365	0.07	100.00



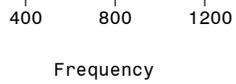
Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0	F	44	44	0.07	0.07
135		3	47	0.01	0.08
161		8	55	0.01	0.09
180		1	56	0.00	0.10
196		2	58	0.00	0.10
209		4	62	0.01	0.11
221		6	68	0.01	0.12
231		10	78	0.02	0.13
240	F	27	105	0.05	0.18
248	F	47	152	0.08	0.26
256	F	74	226	0.13	0.38
263	FFF	140	366	0.24	0.62
271	FFFF	182	548	0.31	0.93
277	FFFFFF	292	840	0.50	1.43
283	FFFFFFF	409	1249	0.69	2.12
289	FFFFFFFF	598	1847	1.02	3.14
295	FFFFFFFFF	726	2573	1.23	4.37
300	FFFFFFFFF	947	3520	1.61	5.98
306	FFFFFFFFF	1046	4566	1.78	7.76
311	FFFFFFFFF	1193	5759	2.03	9.79
316	FFFFFFFFF	1317	7076	2.24	12.02
321	FFFFFFFFF	1434	8510	2.44	14.46
326	FFFFFFFFF	1604	10114	2.73	17.19
330	FFFFFFFFF	1713	11827	2.91	20.10
335	FFFFFFFFF	1778	13605	3.02	23.12
339	FFFFFFFFF	1776	15381	3.02	26.14
344	FFFFFFFFF	1871	17252	3.18	29.32
348	FFFFFFFFF	1907	19159	3.24	32.56
353	FFFFFFFFF	1893	21052	3.22	35.77
357	FFFFFFFFF	1853	22905	3.15	38.92
362	FFFFFFFFF	1953	24858	3.32	42.24
367	FFFFFFFFF	2059	26917	3.50	45.74
371	FFFFFFFFF	1921	28838	3.26	49.00
376	FFFFFFFFF	1865	30703	3.17	52.17
380	FFFFFFFFF	1929	32632	3.28	55.45
385	FFFFFFFFF	1953	34585	3.32	58.77
389	FFFFFFFFF	1837	36422	3.12	61.89
394	FFFFFFFFF	1766	38188	3.00	64.89
398	FFFFFFFFF	1791	39979	3.04	67.93
403	PPPPPPPPPP	1696	41675	2.88	70.82
407	PPPPPPPPPP	1676	43351	2.85	73.66
413	PPPPPPPPPP	1521	44872	2.58	76.25
418	PPPPPPPPPP	1494	46366	2.54	78.79
423	PPPPPPPPPP	1391	47757	2.36	81.15
429	PPPPPPPPPP	1360	49117	2.31	83.46
434	PPPPPPPPPP	1299	50416	2.21	85.67
440	PPPPPPPPPP	1119	51535	1.90	87.57
446	PPPPPPPPPP	1113	52648	1.89	89.46
453	PPPPPPPPPP	994	53642	1.69	91.15
459	PPPPPPPPPP	925	54567	1.57	92.72
467	PPPPPPPPPP	775	55342	1.32	94.04
474	PPPPPPPPPP	724	56066	1.23	95.27
483	PPPPPPPPPP	639	56705	1.09	96.36
492	PPPPPPPPPP	514	57219	0.87	97.23
503	AAAAAAAAAA	479	57698	0.81	98.04
516	AAAAAAAAAA	409	58107	0.69	98.74
531	AAAAAAA	314	58421	0.53	99.27
550	AAAAA	240	58661	0.41	99.68
576	AA	123	58784	0.21	99.89
588	A	50	58834	0.08	99.97
600		16	58850	0.03	100.00



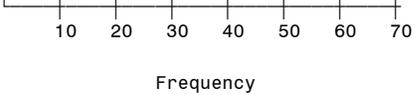
Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0	F	1	1	0.05	0.05
134	F	1	2	0.05	0.09
230	F	1	3	0.05	0.14
239	F	1	4	0.05	0.18
247	FF	3	7	0.14	0.32
255	FF	4	11	0.18	0.51
262	FFFFFFF	13	24	0.60	1.11
269	FFFFFFFF	17	41	0.79	1.89
275	FFFFFFF	16	57	0.74	2.63
282	FFFFFFF	16	73	0.74	3.37
288	FFFFFFFFFFFFFFF	35	108	1.62	4.99
293	FFFFFFFFFFFFFFF	30	138	1.39	6.38
299	FFFFFFFFFFFFFFF	31	169	1.43	7.81
304	FFFFFFFFFFFFFFF	49	218	2.26	10.07
309	FFFFFFFFFFFFFFF	33	251	1.52	11.60
315	FFFFFFFFFFFFFFF	54	305	2.50	14.09
319	FFFFFFFFFFFFFFF	61	366	2.82	16.91
324	FFFFFFFFFFFFFFF	55	421	2.54	19.45
329	FFFFFFFFFFFFFFF	62	483	2.87	22.32
334	FFFFFFFFFFFFFFF	68	551	3.14	25.46
339	FFFFFFFFFFFFFFF	50	601	2.31	27.77
343	FFFFFFFFFFFFFFF	80	681	3.70	31.47
348	FFFFFFFFFFFFFFF	84	765	3.88	35.35
352	FFFFFFFFFFFFFFF	71	836	3.28	38.63
357	FFFFFFFFFFFFFFF	66	902	3.05	41.68
362	FFFFFFFFFFFFFFF	67	969	3.10	44.78
366	FFFFFFFFFFFFFFF	85	1054	3.93	48.71
371	FFFFFFFFFFFFFFF	57	1111	2.63	51.34
375	FFFFFFFFFFFFFFF	72	1183	3.33	54.67
380	FFFFFFFFFFFFFFF	79	1262	3.65	58.32
385	FFFFFFFFFFFFFFF	72	1334	3.33	61.65
389	FFFFFFFFFFFFFFF	63	1397	2.91	64.56
394	FFFFFFFFFFFFFFF	69	1466	3.19	67.74
398	FFFFFFFFFFFFFFF	70	1536	3.23	70.98
404	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	58	1594	2.68	73.66
409	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	48	1642	2.22	75.88
414	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	58	1700	2.68	78.56
419	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	46	1746	2.13	80.68
424	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	62	1808	2.87	83.55
430	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	53	1861	2.45	86.00
436	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	38	1899	1.76	87.75
442	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	33	1932	1.52	89.28
448	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	35	1967	1.62	90.90
455	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	26	1993	1.20	92.10
462	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	38	2031	1.76	93.85
470	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	25	2056	1.16	95.01
478	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	29	2085	1.34	96.35
487	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	14	2099	0.65	97.00
497	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	15	2114	0.69	97.69
508	AAAAAAA	14	2128	0.65	98.34
521	AAAAA	9	2137	0.42	98.75
536	AAAAA	8	2145	0.37	99.12
555	AAAAAA	12	2157	0.55	99.68
582	AAA	6	2163	0.28	99.95
591	A	1	2164	0.05	100.00



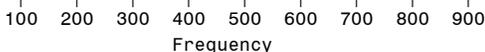
Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0		23	23	0.05	0.05
192		1	24	0.00	0.06
224		4	28	0.01	0.07
244		1	29	0.00	0.07
269		2	31	0.00	0.07
279		1	32	0.00	0.07
287		6	38	0.01	0.09
294		6	44	0.01	0.10
301		15	59	0.03	0.14
307	F	36	95	0.08	0.22
312	F	45	140	0.10	0.33
318	FF	84	224	0.20	0.52
323	FFF	135	359	0.31	0.84
328	FFFF	181	540	0.42	1.26
332	FFFF	218	758	0.51	1.76
336	FFFFFF	296	1054	0.69	2.45
341	FFFFFFF	384	1438	0.89	3.35
345	FFFFFFF	432	1870	1.01	4.35
348	FFFFFFF	496	2366	1.15	5.51
352	FFFFFFF	579	2945	1.35	6.86
356	FFFFFFF	594	3539	1.38	8.24
359	FFFFFFF	672	4211	1.56	9.80
363	FFFFFFF	683	4894	1.59	11.39
367	FFFFFFF	788	5682	1.83	13.23
370	FFFFFFF	765	6447	1.78	15.01
373	FFFFFFF	822	7269	1.91	16.92
377	FFFFFFF	838	8107	1.95	18.87
380	FFFFFFF	865	8972	2.01	20.88
384	FFFFFFF	953	9925	2.22	23.10
387	FFFFFFF	987	10912	2.30	25.40
390	FFFFFFF	959	11871	2.23	27.63
394	FFFFFFF	1019	12890	2.37	30.00
397	FFFFFFF	1084	13974	2.52	32.53
401	PPPPPPPPPPPPPPPPPPPP	1104	15078	2.57	35.10
404	PPPPPPPPPPPPPPPPPPPP	1190	16268	2.77	37.87
407	PPPPPPPPPPPPPPPPPPPP	1204	17472	2.80	40.67
411	PPPPPPPPPPPPPPPPPPPP	1194	18666	2.78	43.45
414	PPPPPPPPPPPPPPPPPPPP	1259	19925	2.93	46.38
418	PPPPPPPPPPPPPPPPPPPP	1359	21284	3.16	49.54
421	PPPPPPPPPPPPPPPPPPPP	1435	22719	3.34	52.88
425	PPPPPPPPPPPPPPPPPPPP	1405	24124	3.27	56.15
429	PPPPPPPPPPPPPPPPPPPP	1367	25491	3.18	59.34
433	PPPPPPPPPPPPPPPPPPPP	1430	26921	3.33	62.67
437	PPPPPPPPPPPPPPPPPPPP	1488	28409	3.46	66.13
441	PPPPPPPPPPPPPPPPPPPP	1457	29866	3.39	69.52
446	PPPPPPPPPPPPPPPPPPPP	1477	31343	3.44	72.96
450	PPPPPPPPPPPPPPPPPPPP	1444	32787	3.36	76.32
455	PPPPPPPPPPPPPPPPPPPP	1397	34184	3.25	79.57
459	PPPPPPPPPPPPPPPPPPPP	1449	35633	3.37	82.94
465	PPPPPPPPPPPPPPPPPPPP	1257	36890	2.93	85.87
470	PPPPPPPPPPPPPPPPPPPP	1157	38047	2.69	88.56
477	PPPPPPPPPPPPPPPPPPPP	1054	39101	2.45	91.02
483	PPPPPPPPPPPPPPPPPPPP	979	40080	2.28	93.30
490	PPPPPPPPPPPPPPPPPP	808	40888	1.88	95.18
498	PPPPPPPPPPPPPPPPPP	701	41589	1.63	96.81
508	AAAAAAAAAA	534	42123	1.24	98.05
519	AAAAAAAA	396	42519	0.92	98.97
533	AAAAA	273	42792	0.64	99.61
553	AA	109	42901	0.25	99.86
585	A	46	42947	0.11	99.97
600		13	42960	0.03	100.00



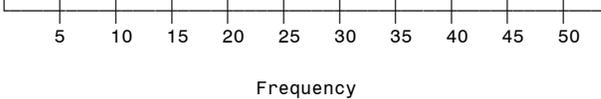
Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0	F	1	1	0.06	0.06
305	F	2	3	0.13	0.19
311	F	1	4	0.06	0.26
317	F	2	6	0.13	0.39
322	F	2	8	0.13	0.52
327	FFFF	8	16	0.52	1.03
332	FFFFF	10	26	0.65	1.68
336	FFFF	8	34	0.52	2.20
341	FFFFFFF	14	48	0.90	3.10
345	FFFFFFFF	18	66	1.16	4.26
349	FFFFFFFFFFFF	29	95	1.87	6.14
353	FFFFFFFFFFFFFF	33	128	2.13	8.27
356	FFFFFFFF	18	146	1.16	9.43
360	FFFFFFFFFFFFFF	31	177	2.00	11.43
364	FFFFFFFFFFFFFFF	41	218	2.65	14.08
368	FFFFFFFFFFFFFFF	36	254	2.33	16.41
371	FFFFFFFFFFFFFFF	36	290	2.33	18.73
374	FFFFFFFFFFFFFFF	36	326	2.33	21.06
378	FFFFFFFFFFFFFFF	43	369	2.78	23.84
381	FFFFFFFFFFFFFFF	35	404	2.26	26.10
385	FFFFFFFFFFFFFFF	52	456	3.36	29.46
388	FFFFFFFFFFFFFFF	39	495	2.52	31.98
391	FFFFFFFFFFFFFFF	49	544	3.17	35.14
394	FFFFFFFFFFFFFFF	58	602	3.75	38.89
398	FFFFFFFFFFFFFFF	41	643	2.65	41.54
401	PPPPPPPPPPPPPPPPPPPPPP	48	691	3.10	44.64
404	PPPPPPPPPPPPPPPPPPPPPP	48	739	3.10	47.74
408	PPPPPPPPPPPPPPPPPPPPPP	55	794	3.55	51.29
411	PPPPPPPPPPPPPPPPPPPPPP	43	837	2.78	54.07
415	PPPPPPPPPPPPPPPPPPPPPP	44	881	2.84	56.91
418	PPPPPPPPPPPPPPPPPPPPPP	48	929	3.10	60.01
421	PPPPPPPPPPPPPPPPPPPPPP	63	992	4.07	64.08
425	PPPPPPPPPPPPPPPPPPPPPP	70	1062	4.52	68.60
429	PPPPPPPPPPPPPPPPPPPPPP	46	1108	2.97	71.58
433	PPPPPPPPPPPPPPPPPPPPPP	48	1156	3.10	74.68
436	PPPPPPPPPPPPPPPPPPPPPP	42	1198	2.71	77.39
440	PPPPPPPPPPPPPPPPPPPPPP	50	1248	3.23	80.62
444	PPPPPPPPPPPP	28	1276	1.81	82.43
448	PPPPPPPPPPPPPPPP	33	1309	2.13	84.56
453	PPPPPPPPPPPPPP	30	1339	1.94	86.50
458	PPPPPPPPPPPPPP	31	1370	2.00	88.50
462	PPPPPPPPPPPPPPPP	34	1404	2.20	90.70
468	PPPPPPPPPPPPPP	31	1435	2.00	92.70
473	PPPPPPPPPPPP	27	1462	1.74	94.44
479	PPPPPPPPPP	22	1484	1.42	95.87
485	PPPPPPPPPP	22	1506	1.42	97.29
493	PPPPPPPP	16	1522	1.03	98.32
501	AAAAA	10	1532	0.65	98.97
510	AAA	6	1538	0.39	99.35
521	AA	4	1542	0.26	99.61
535	A	2	1544	0.13	99.74
555	AA	3	1547	0.19	99.94
587	A	1	1548	0.06	100.00



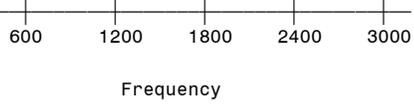
Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0	F	24	24	0.08	0.08
175		4	28	0.01	0.09
210		3	31	0.01	0.10
232		1	32	0.00	0.10
259		2	34	0.01	0.11
270		6	40	0.02	0.13
279		1	41	0.00	0.13
286	F	10	51	0.03	0.16
294	F	14	65	0.04	0.21
300	FF	36	101	0.11	0.32
306	FFFF	73	174	0.23	0.55
312	FFFFFF	113	287	0.36	0.91
317	FFFFFFF	130	417	0.41	1.32
322	FFFFFFFF	225	642	0.71	2.04
326	FFFFFFFFF	310	952	0.98	3.02
331	FFFFFFFFF	449	1401	1.42	4.44
335	FFFFFFFFF	548	1949	1.74	6.18
339	FFFFFFFFF	586	2535	1.86	8.04
343	FFFFFFFFF	718	3253	2.28	10.31
347	FFFFFFFFF	713	3966	2.26	12.57
351	FFFFFFFFF	812	4778	2.57	15.15
355	FFFFFFFFF	896	5674	2.84	17.99
358	FFFFFFFFF	845	6519	2.68	20.67
362	FFFFFFFFF	871	7390	2.76	23.43
366	FFFFFFFFF	860	8250	2.73	26.16
369	FFFFFFFFF	912	9162	2.89	29.05
372	FFFFFFFFF	839	10001	2.66	31.71
376	FFFFFFFFF	876	10877	2.78	34.48
379	FFFFFFFFF	846	11723	2.68	37.17
382	FFFFFFFFF	855	12578	2.71	39.88
385	FFFFFFFFF	918	13496	2.91	42.79
389	FFFFFFFFF	802	14298	2.54	45.33
392	FFFFFFFFF	809	15107	2.56	47.89
396	FFFFFFFFF	749	15856	2.37	50.27
399	FFFFFFFFF	803	16659	2.55	52.82
402	PPPPPPPP	800	17459	2.54	55.35
405	PPPPPPPP	766	18225	2.43	57.78
409	PPPPPPPP	713	18938	2.26	60.04
412	PPPPPPPP	747	19685	2.37	62.41
416	PPPPPPPP	747	20432	2.37	64.78
419	PPPPPPPP	686	21118	2.17	66.95
423	PPPPPPPP	718	21836	2.28	69.23
427	PPPPPPPP	724	22560	2.30	71.52
431	PPPPPPPP	695	23255	2.20	73.73
435	PPPPPPPP	614	23869	1.95	75.67
438	PPPPPPPP	681	24550	2.16	77.83
443	PPPPPPPP	667	25217	2.11	79.95
447	PPPPPPPP	645	25862	2.04	81.99
452	PPPPPPPP	626	26488	1.98	83.98
456	PPPPPPPP	608	27096	1.93	85.90
462	PPPPPPPP	589	27685	1.87	87.77
467	PPPPPPPP	511	28196	1.62	89.39
472	PPPPPPPP	546	28742	1.73	91.12
479	PPPPPPPP	510	29252	1.62	92.74
485	PPPPPPPP	471	29723	1.49	94.23
493	PPPPPPPP	428	30151	1.36	95.59
502	AAAAAAAA	397	30548	1.26	96.85
512	AAAAAAAA	339	30887	1.07	97.92
523	AAAAAAAA	268	31155	0.85	98.77
538	AAAAAAA	167	31322	0.53	99.30
559	AAAAAAA	145	31467	0.46	99.76
594	AAA	53	31520	0.17	99.93
600	A	22	31542	0.07	100.00



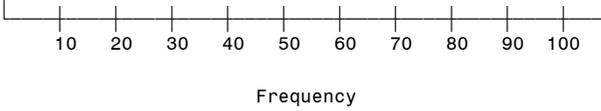
Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0	F	1	1	0.09	0.09
300	FF	2	3	0.17	0.26
306	FF	2	5	0.17	0.43
312	FFF	3	8	0.26	0.69
317	FFFF	4	12	0.34	1.03
322	FFFFFFFF	12	24	1.03	2.06
327	FFFFFFFFFFFFFF	20	44	1.72	3.77
331	FFFFFFFFFFFFFF	16	60	1.37	5.15
336	FFFFFFFFFFFFFF	26	86	2.23	7.38
340	FFFFFFFFFFFFFF	37	123	3.17	10.55
343	FFFFFFFFFFFFFF	22	145	1.89	12.44
347	FFFFFFFFFFFFFF	35	180	3.00	15.44
351	FFFFFFFFFFFFFF	31	211	2.66	18.10
355	FFFFFFFFFFFFFF	33	244	2.83	20.93
359	FFFFFFFFFFFFFF	39	283	3.34	24.27
362	FFFFFFFFFFFFFF	44	327	3.77	28.04
366	FFFFFFFFFFFFFF	42	369	3.60	31.65
369	FFFFFFFFFFFFFF	45	414	3.86	35.51
373	FFFFFFFFFFFFFF	53	467	4.55	40.05
376	FFFFFFFFFFFFFF	42	509	3.60	43.65
379	FFFFFFFFFFFFFF	35	544	3.00	46.66
383	FFFFFFFFFFFFFF	43	587	3.69	50.34
386	FFFFFFFFFFFFFF	51	638	4.37	54.72
390	FFFFFFFFFFFFFF	31	669	2.66	57.38
393	FFFFFFFFFFFFFF	27	696	2.32	59.69
396	FFFFFFFFFFFFFF	40	736	3.43	63.12
400	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	40	776	3.43	66.55
403	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	33	809	2.83	69.38
407	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	25	834	2.14	71.53
410	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	24	858	2.06	73.58
413	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	40	898	3.43	77.02
417	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	21	919	1.80	78.82
421	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	30	949	2.57	81.39
424	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	28	977	2.40	83.79
428	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	19	996	1.63	85.42
432	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	16	1012	1.37	86.79
436	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	18	1030	1.54	88.34
440	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	20	1050	1.72	90.05
444	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	16	1066	1.37	91.42
448	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	17	1083	1.46	92.88
453	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	15	1098	1.29	94.17
458	PPPPPPPPPP	10	1108	0.86	95.03
463	PPPPPPPPPP	9	1117	0.77	95.80
468	PPPPPPPPPP	11	1128	0.94	96.74
474	PPPPPPPPPP	10	1138	0.86	97.60
480	PPPPPPPP	8	1146	0.69	98.28
487	PPPP	4	1150	0.34	98.63
494	PPPP	4	1154	0.34	98.97
503	AA	2	1156	0.17	99.14
513	AAAAAAA	7	1163	0.60	99.74
540	AAA	3	1166	0.26	100.00



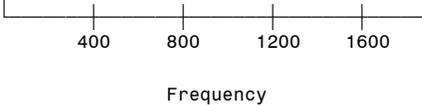
Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0	F	41	41	0.06	0.06
214		4	45	0.01	0.07
245		2	47	0.00	0.07
264		4	51	0.01	0.08
290		1	52	0.00	0.08
299		10	62	0.02	0.10
307		12	74	0.02	0.11
315		30	104	0.05	0.16
322	F	43	147	0.07	0.23
328	F	85	232	0.13	0.36
333	FF	158	390	0.24	0.60
339	FFF	251	641	0.39	0.99
344	FFFF	331	972	0.51	1.50
349	FFFFFF	436	1408	0.67	2.17
354	FFFFFFF	503	1911	0.77	2.94
358	FFFFFFF	625	2536	0.96	3.91
363	FFFFFFF	728	3264	1.12	5.03
367	FFFFFFF	825	4089	1.27	6.30
371	FFFFFFF	923	5012	1.42	7.72
376	FFFFFFF	1007	6019	1.55	9.27
380	FFFFFFF	1136	7155	1.75	11.02
384	FFFFFFF	1154	8309	1.78	12.80
388	FFFFFFF	1322	9631	2.04	14.84
392	FFFFFFF	1463	11094	2.25	17.09
396	FFFFFFF	1480	12574	2.28	19.37
400	PPPPPPPPPPPPPPPPPPPPPP	1652	14226	2.54	21.91
404	PPPPPPPPPPPPPPPPPPPPPP	1785	16011	2.75	24.66
408	PPPPPPPPPPPPPPPPPPPPPP	1950	17961	3.00	27.67
412	PPPPPPPPPPPPPPPPPPPPPP	2072	20033	3.19	30.86
416	PPPPPPPPPPPPPPPPPPPPPP	2188	22221	3.37	34.23
420	PPPPPPPPPPPPPPPPPPPPPP	2368	24589	3.65	37.88
424	PPPPPPPPPPPPPPPPPPPPPP	2351	26940	3.62	41.50
428	PPPPPPPPPPPPPPPPPPPPPP	2692	29632	4.15	45.64
433	PPPPPPPPPPPPPPPPPPPPPP	2808	32440	4.33	49.97
438	PPPPPPPPPPPPPPPPPPPPPP	2894	35334	4.46	54.43
442	PPPPPPPPPPPPPPPPPPPPPP	3032	38366	4.67	59.10
447	PPPPPPPPPPPPPPPPPPPPPP	3126	41492	4.82	63.91
452	PPPPPPPPPPPPPPPPPPPPPP	3086	44578	4.75	68.67
458	PPPPPPPPPPPPPPPPPPPPPP	2990	47568	4.61	73.27
464	PPPPPPPPPPPPPPPPPPPPPP	2934	50502	4.52	77.79
470	PPPPPPPPPPPPPPPPPPPPPP	2851	53353	4.39	82.18
477	PPPPPPPPPPPPPPPPPPPPPP	2603	55956	4.01	86.19
484	PPPPPPPPPPPPPPPPPPPPPP	2325	58281	3.58	89.77
492	PPPPPPPPPPPPPPPPPPPPPP	2074	60355	3.19	92.97
501	AAAAAAAAAAAAAAAAAAAA	1599	61954	2.46	95.43
512	AAAAAAAAAAAAAAAAAAAA	1240	63194	1.91	97.34
526	AAAAAAAAAAAA	887	64081	1.37	98.71
545	AAAAAAA	521	64602	0.80	99.51
577	AAA	250	64852	0.39	99.90
600	A	67	64919	0.10	100.00



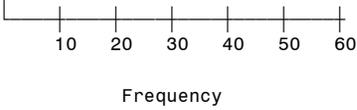
Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0	F	2	2	0.09	0.09
301	F	1	3	0.04	0.13
323	FFFF	7	10	0.31	0.44
329	F	2	12	0.09	0.53
335	FFFFFF	12	24	0.53	1.07
341	FFFFFFF	13	37	0.58	1.64
345	FFFFFFF	16	53	0.71	2.35
351	FFFFFFFF	27	80	1.20	3.55
355	FFFFFFFF	29	109	1.29	4.84
360	FFFFFFFF	34	143	1.51	6.35
364	FFFFFFFF	33	176	1.47	7.82
368	FFFFFFFF	37	213	1.64	9.46
373	FFFFFFFF	41	254	1.82	11.28
377	FFFFFFFF	49	303	2.18	13.46
381	FFFFFFFF	50	353	2.22	15.68
385	FFFFFFFF	45	398	2.00	17.68
389	FFFFFFFF	70	468	3.11	20.79
393	FFFFFFFF	62	530	2.75	23.55
397	FFFFFFFF	64	594	2.84	26.39
401	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	73	667	3.24	29.63
405	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	93	760	4.13	33.76
409	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	84	844	3.73	37.49
412	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	78	922	3.47	40.96
417	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	85	1007	3.78	44.74
421	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	105	1112	4.66	49.40
425	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	96	1208	4.26	53.67
429	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	83	1291	3.69	57.35
434	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	83	1374	3.69	61.04
438	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	90	1464	4.00	65.04
443	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	90	1554	4.00	69.04
448	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	80	1634	3.55	72.59
453	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	91	1725	4.04	76.63
458	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	89	1814	3.95	80.59
464	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	66	1880	2.93	83.52
470	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	71	1951	3.15	86.67
477	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	78	2029	3.47	90.14
484	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	55	2084	2.44	92.58
492	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	47	2131	2.09	94.67
501	AAAAAAAAAAAAAAAAAAAAAAAAAAAA	53	2184	2.35	97.02
512	AAAAAAAAAAAA	27	2211	1.20	98.22
526	AAAAAAAAAAAA	24	2235	1.07	99.29
545	AAAAAAA	14	2249	0.62	99.91
600	A	2	2251	0.09	100.00



Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0		13	13	0.03	0.03
247		1	14	0.00	0.03
261		1	15	0.00	0.04
273		6	21	0.01	0.05
283		2	23	0.00	0.05
292		7	30	0.02	0.07
300		14	44	0.03	0.10
307	F	35	79	0.08	0.18
313	FF	78	157	0.18	0.37
319	FFF	135	292	0.32	0.68
325	FFFF	196	488	0.46	1.14
330	FFFFFF	284	772	0.66	1.81
335	FFFFFFF	375	1147	0.88	2.68
340	FFFFFFF	455	1602	1.06	3.75
345	FFFFFFF	584	2186	1.37	5.11
350	FFFFFFF	681	2867	1.59	6.71
354	FFFFFFF	735	3602	1.72	8.43
358	FFFFFFF	873	4475	2.04	10.47
363	FFFFFFF	910	5385	2.13	12.60
367	FFFFFFF	980	6365	2.29	14.89
371	FFFFFFF	1088	7453	2.55	17.44
375	FFFFFFF	1131	8584	2.65	20.08
379	FFFFFFF	1213	9797	2.84	22.92
384	FFFFFFF	1347	11144	3.15	26.07
388	FFFFFFF	1426	12570	3.34	29.41
392	FFFFFFF	1440	14010	3.37	32.77
396	FFFFFFF	1534	15544	3.59	36.36
400	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1624	17168	3.80	40.16
404	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1619	18787	3.79	43.95
408	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1816	20603	4.25	48.20
412	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1838	22441	4.30	52.50
417	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1777	24218	4.16	56.66
421	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1694	25912	3.96	60.62
426	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1737	27649	4.06	64.68
431	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1714	29363	4.01	68.69
436	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1688	31051	3.95	72.64
441	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1638	32689	3.83	76.47
446	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1505	34194	3.52	79.99
453	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1351	35545	3.16	83.15
459	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1308	36853	3.06	86.21
465	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1256	38109	2.94	89.15
473	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1113	39222	2.60	91.76
481	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	990	40212	2.32	94.07
491	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	804	41016	1.88	95.95
502	AAAAAAAAAAAA	657	41673	1.54	97.49
516	AAAAAAAAAA	496	42169	1.16	98.65
536	AAAAAAA	332	42501	0.78	99.43
568	AAAA	179	42680	0.42	99.85
600	A	66	42746	0.15	100.00



Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
291	F	1	1	0.10	0.10
314	F	2	3	0.20	0.30
321	F	2	5	0.20	0.50
326	FF	4	9	0.40	0.90
332	FFFFF	10	19	1.00	1.91
338	FF	4	23	0.40	2.31
343	FFFF	8	31	0.80	3.11
348	FFFFFF	11	42	1.10	4.21
353	FFFFFFF	14	56	1.40	5.62
357	FFFFFFFF	21	77	2.11	7.72
362	FFFFFFFFF	22	99	2.21	9.93
367	FFFFFFFFF	18	117	1.81	11.74
371	FFFFFFFFFFFF	28	145	2.81	14.54
376	FFFFFFFFFFFF	25	170	2.51	17.05
380	FFFFFFFFFFFF	21	191	2.11	19.16
384	FFFFFFFFFFFFFFFF	41	232	4.11	23.27
388	FFFFFFFFFFFFFFFF	38	270	3.81	27.08
392	FFFFFFFFFFFFFFFF	33	303	3.31	30.39
397	FFFFFFFFFFFFFFFF	38	341	3.81	34.20
401	PPPPPPPPPPPPPPPPPPPP	46	387	4.61	38.82
405	PPPPPPPPPPPPPPPPPPPP	43	430	4.31	43.13
410	PPPPPPPPPPPPPPPPPPPP	47	477	4.71	47.84
414	PPPPPPPPPPPPPPPPPP	35	512	3.51	51.35
418	PPPPPPPPPPPPPPPPPPPPPPPPPPPP	60	572	6.02	57.37
423	PPPPPPPPPPPPPPPPPP	40	612	4.01	61.38
428	PPPPPPPPPPPPPPPPPPPPPPPPPP	46	658	4.61	66.00
432	PPPPPPPPPPPP	26	684	2.61	68.61
437	PPPPPPPPPPPPPPPPPP	33	717	3.31	71.92
442	PPPPPPPPPPPPPPPPPP	37	754	3.71	75.63
448	PPPPPPPPPPPPPPPPPPPPPPPPPP	47	801	4.71	80.34
453	PPPPPPPPPPPPPPPPPP	35	836	3.51	83.85
459	PPPPPPPPPPPPPPPPPP	34	870	3.41	87.26
466	PPPPPPPPPPPPPP	27	897	2.71	89.97
472	PPPPPPPPPP	21	918	2.11	92.08
480	PPPPPPPPPP	17	935	1.71	93.78
489	PPPPPPPPPPPP	24	959	2.41	96.19
498	PPPPPPPP	16	975	1.60	97.79
510	AAAAA	10	985	1.00	98.80
524	AAAAA	9	994	0.90	99.70
544	AA	3	997	0.30	100.00



Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0	FF	4	4	0.15	0.15
285		1	5	0.04	0.19
293	F	3	8	0.11	0.30
301	FF	4	12	0.15	0.44
308	FFFF	11	23	0.41	0.85
315	FFFFFF	17	40	0.63	1.48
322	FFFFFF	16	56	0.59	2.08
328	FFFFFFFF	24	80	0.89	2.97
334	FFFFFFFFFFFFFF	39	119	1.45	4.41
339	FFFFFFFFFFFFFF	39	158	1.45	5.86
345	FFFFFFFFFFFFFF	41	199	1.52	7.38
350	FFFFFFFFFFFFFF	44	243	1.63	9.01
355	FFFFFFFFFFFFFF	45	288	1.67	10.67
360	FFFFFFFFFFFFFF	58	346	2.15	12.82
365	FFFFFFFFFFFFFF	68	414	2.52	15.34
370	FFFFFFFFFFFFFF	53	467	1.96	17.31
375	FFFFFFFFFFFFFF	68	535	2.52	19.83
380	FFFFFFFFFFFFFF	79	614	2.93	22.76
384	FFFFFFFFFFFFFF	68	682	2.52	25.28
389	FFFFFFFFFFFFFF	63	745	2.34	27.61
394	FFFFFFFFFFFFFF	81	826	3.00	30.62
399	FFFFFFFFFFFFFF	95	921	3.52	34.14
403	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	89	1010	3.30	37.44
408	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	94	1104	3.48	40.92
414	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	101	1205	3.74	44.66
418	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	102	1307	3.78	48.44
424	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	114	1421	4.23	52.67
429	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	103	1524	3.82	56.49
434	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	108	1632	4.00	60.49
440	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	113	1745	4.19	64.68
445	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	115	1860	4.26	68.94
451	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	99	1959	3.67	72.61
458	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	97	2056	3.60	76.20
464	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	96	2152	3.56	79.76
471	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	96	2248	3.56	83.32
479	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	97	2345	3.60	86.92
487	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	91	2436	3.37	90.29
496	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	77	2513	2.85	93.14
506	AAAAAAAAAAAAAAAAAAAAAAAA	61	2574	2.26	95.40
518	AAAAAAAAAAAAAAAA	40	2614	1.48	96.89
531	AAAAAAAAAAAAAAAA	40	2654	1.48	98.37
548	AAAAAAAAAAAA	28	2682	1.04	99.41
571	AAAA	11	2693	0.41	99.81
585	AA	4	2697	0.15	99.96
600		1	2698	0.04	100.00

MC Core 1 Writing Prompt Core 1

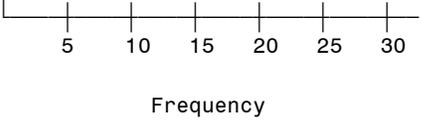
Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
226		4	4	0.01	0.01
247		6	10	0.02	0.03
262		13	23	0.04	0.07
275		21	44	0.06	0.13
285		23	67	0.07	0.20
295	F	48	115	0.14	0.34
303	F	48	163	0.14	0.48
311	FF	80	243	0.24	0.71
318	FF	90	333	0.26	0.98
325	FFF	126	459	0.37	1.35
332	FFF	160	619	0.47	1.82
338	FFFF	182	801	0.54	2.36
345	FFFF	205	1006	0.60	2.96
351	FFFFFFF	353	1359	1.04	4.00
357	FFFFFFF	377	1736	1.11	5.11
364	FFFFFFF	472	2208	1.39	6.49
370	FFFFFFF	574	2782	1.69	8.18
377	FFFFFFF	725	3507	2.13	10.31
384	FFFFFFF	838	4345	2.46	12.78
390	FFFFFFF	1025	5370	3.01	15.79
397	FFFFFFF	1152	6522	3.39	19.18
404	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1509	8031	4.44	23.62
412	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1616	9647	4.75	28.37
419	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1829	11476	5.38	33.75
427	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1951	13427	5.74	39.49
435	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	2188	15615	6.43	45.92
443	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	2307	17922	6.78	52.71
452	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	2391	20313	7.03	59.74
462	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	2443	22756	7.18	66.92
472	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	2308	25064	6.79	73.71
483	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	2143	27207	6.30	80.01
497	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1960	29167	5.76	85.78
512	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	1548	30715	4.55	90.33
532	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	1189	31904	3.50	93.82
558	AAAAAAAAAAAAAAAAAAAAAAAA	944	32848	2.78	96.60
599	AAAAAAAAAAAAAAAA	651	33499	1.91	98.51
600	AAAAAAAAAA	505	34004	1.49	100.00

MC Core 1 Writing Prompt Core 2

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
217		2	2	0.01	0.01
238		13	15	0.04	0.04
253		16	31	0.05	0.09
265		17	48	0.05	0.14
275		16	64	0.05	0.19
285	F	27	91	0.08	0.27
293	F	43	134	0.13	0.40
301	F	63	197	0.19	0.59
308	FF	91	288	0.27	0.86
316	FF	107	395	0.32	1.18
323	FFF	126	521	0.38	1.56
331	FFF	162	683	0.49	2.05
338	FFFF	189	872	0.57	2.61
345	FFFFFF	285	1157	0.85	3.47
352	FFFFFFF	341	1498	1.02	4.49
359	FFFFFFF	393	1891	1.18	5.67
366	FFFFFFFF	532	2423	1.59	7.26
374	FFFFFFFFF	582	3005	1.74	9.01
381	FFFFFFFFF	763	3768	2.29	11.29
388	FFFFFFFFF	843	4611	2.53	13.82
396	FFFFFFFFF	1021	5632	3.06	16.88
403	PPPPPPPPPPPPPPPPPPPPPPPPPP	1259	6891	3.77	20.65
410	PPPPPPPPPPPPPPPPPPPPPPPPPP	1382	8273	4.14	24.79
418	PPPPPPPPPPPPPPPPPPPPPPPPPP	1593	9866	4.77	29.57
426	PPPPPPPPPPPPPPPPPPPPPPPPPP	1817	11683	5.45	35.01
434	PPPPPPPPPPPPPPPPPPPPPPPPPP	2035	13718	6.10	41.11
443	PPPPPPPPPPPPPPPPPPPPPPPPPP	2140	15858	6.41	47.52
453	PPPPPPPPPPPPPPPPPPPPPPPPPP	2345	18203	7.03	54.55
462	PPPPPPPPPPPPPPPPPPPPPPPPPP	2438	20641	7.31	61.85
474	PPPPPPPPPPPPPPPPPPPPPPPPPP	2488	23129	7.46	69.31
486	PPPPPPPPPPPPPPPPPPPPPPPPPP	2389	25518	7.16	76.47
501	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	2186	27704	6.55	83.02
517	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	1916	29620	5.74	88.76
536	AAAAAAAAAAAAAAAAAAAAAAAAAAAA	1249	30869	3.74	92.51
560	AAAAAAAAAAAAAAAAAAAAAAAAAAAA	1082	31951	3.24	95.75
595	AAAAAAAAAAAAAAAAAAAA	818	32769	2.45	98.20
600	AAAAAAAAAAAA	601	33370	1.80	100.00

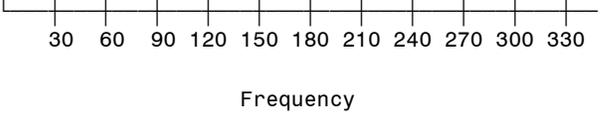
MC Core 2 Writing Prompt Core 1

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0	F	1	1	0.21	0.21
271	F	1	2	0.21	0.43
296	F	1	3	0.21	0.64
306	F	1	4	0.21	0.85
315	F	1	5	0.21	1.07
323	FFFFF	5	10	1.07	2.14
331	FFF	3	13	0.64	2.78
338	FFFFFFF	6	19	1.28	4.06
346	FFFFFFF	6	25	1.28	5.34
353	FFFFFFF	6	31	1.28	6.62
360	FFFFFFFFF	8	39	1.71	8.33
367	FFFFFFFFFFFF	13	52	2.78	11.11
374	FFFFFFFFFFFF	10	62	2.14	13.25
381	FFFFFFFFFFFF	12	74	2.56	15.81
387	FFFFFFFFFFFFFFFFFF	18	92	3.85	19.66
394	FFFFFFFFFFFFFFFFFFFF	18	110	3.85	23.50
401	PPPPPPPPPPPPPPPPPP	19	129	4.06	27.56
408	PPPPPPPPPPPPPPPPPP	18	147	3.85	31.41
415	PPPPPPPPPPPPPPPPPPPPPPPPPP	28	175	5.98	37.39
422	PPPPPPPPPPPPPPPPPPPPPPPPPPPP	32	207	6.84	44.23
429	PPPPPPPPPPPPPPPPPPPPPPPPPP	25	232	5.34	49.57
436	PPPPPPPPPPPPPPPPPPPPPPPP	24	256	5.13	54.70
443	PPPPPPPPPPPPPPPPPPPPPP	21	277	4.49	59.19
450	PPPPPPPPPPPPPPPPPPPPPPPPPP	28	305	5.98	65.17
458	PPPPPPPPPPPPPPPPPPPPPPPP	25	330	5.34	70.51
465	PPPPPPPPPPPPPPPPPPPP	19	349	4.06	74.57
474	PPPPPPPPPPPPPPPPPPPPPPPPPP	28	377	5.98	80.56
482	PPPPPPPPPPPPPP	14	391	2.99	83.55
492	PPPPPPPPPPPPPPPPPP	18	409	3.85	87.39
502	AAAAAAAAAAAA	13	422	2.78	90.17
514	AAAAAAAAAAAAAAAAAAAA	18	440	3.85	94.02
529	AAAAAAAAA	9	449	1.92	95.94
549	AAAAAAAAAAAA	11	460	2.35	98.29
582	AAAA	4	464	0.85	99.15
600	AAAA	4	468	0.85	100.00



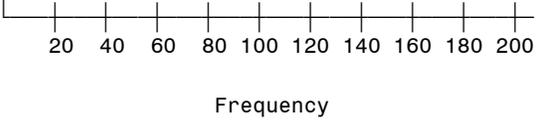
MC Core 2 Writing Prompt Core 2

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
251	F	4	4	0.08	0.08
266		3	7	0.06	0.13
278		2	9	0.04	0.17
289	F	4	13	0.08	0.25
298	FF	13	26	0.25	0.49
306	FF	17	43	0.32	0.82
314	F	6	49	0.11	0.93
322	FFF	23	72	0.44	1.37
329	FF	17	89	0.32	1.69
336	FFFFF	39	128	0.74	2.44
343	FFFFFFF	55	183	1.05	3.48
350	FFFFFFF	50	233	0.95	4.43
357	FFFFFFFFF	65	298	1.24	5.67
363	FFFFFFFFFFFF	105	403	2.00	7.67
370	FFFFFFFFFFFF	111	514	2.11	9.78
377	FFFFFFFFFFFF	136	650	2.59	12.37
385	FFFFFFFFFFFF	162	812	3.08	15.45
392	FFFFFFFFFFFF	203	1015	3.86	19.31
399	FFFFFFFFFFFF	205	1220	3.90	23.22
406	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	244	1464	4.64	27.86
413	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	259	1723	4.93	32.79
420	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	290	2013	5.52	38.31
428	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	304	2317	5.78	44.09
435	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	317	2634	6.03	50.12
443	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	330	2964	6.28	56.40
451	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	304	3268	5.78	62.19
460	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	343	3611	6.53	68.72
469	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	283	3894	5.39	74.10
479	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	290	4184	5.52	79.62
490	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	279	4463	5.31	84.93
502	AAAAAAAAAAAAAAAAAAAAAAAAAAAA	192	4655	3.65	88.58
517	AAAAAAAAAAAAAAAAAAAAAAAAAAAA	189	4844	3.60	92.18
534	AAAAAAAAAAAAAAAAAAAAAAAAAAAA	161	5005	3.06	95.24
557	AAAAAAAAAAAAAAAAAAAA	135	5140	2.57	97.81
593	AAAAAAAA	76	5216	1.45	99.26
600	AAAAA	39	5255	0.74	100.00



MC Core 3 Writing Prompt Core 1

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
240		1	1	0.04	0.04
256		2	3	0.07	0.11
279		2	5	0.07	0.18
289	F	6	11	0.22	0.40
298	F	6	17	0.22	0.62
306	FF	10	27	0.37	0.99
313	FF	10	37	0.37	1.36
321	FFF	17	54	0.62	1.98
328	FFFF	21	75	0.77	2.75
335	FFFFFF	31	106	1.14	3.89
341	FFFFFFF	36	142	1.32	5.21
348	FFFFFFF	42	184	1.54	6.75
355	FFFFFFF	54	238	1.98	8.73
362	FFFFFFF	67	305	2.46	11.19
369	FFFFFFF	68	373	2.49	13.68
376	FFFFFFF	78	451	2.86	16.54
384	FFFFFFF	112	563	4.11	20.65
391	FFFFFFF	131	694	4.81	25.46
399	FFFFFFF	149	843	5.47	30.92
406	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	156	999	5.72	36.65
414	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	145	1144	5.32	41.97
422	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	179	1323	6.57	48.53
431	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	173	1496	6.35	54.88
439	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	205	1701	7.52	62.40
448	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	160	1861	5.87	68.27
457	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	170	2031	6.24	74.50
467	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	153	2184	5.61	80.12
478	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	141	2325	5.17	85.29
490	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	101	2426	3.71	88.99
503	AAAAAAAAAAAAAAAAAAAA	101	2527	3.71	92.70
518	AAAAAAAAAAAAAAAAAAAA	86	2613	3.15	95.85
536	AAAAAAAAAA	50	2663	1.83	97.69
559	AAAAAAA	33	2696	1.21	98.90
597	AAAA	22	2718	0.81	99.71
600	AA	8	2726	0.29	100.00



MC Core 3 Writing Prompt Core 2

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
219		1	1	0.02	0.02
240	F	4	5	0.10	0.12
255		2	7	0.05	0.17
268	F	7	14	0.17	0.35
278	F	5	19	0.12	0.47
288		3	22	0.07	0.54
296		3	25	0.07	0.62
304	F	7	32	0.17	0.79
312	FF	12	44	0.30	1.09
319	F	8	52	0.20	1.29
326	FFFF	30	82	0.74	2.03
333	FFFF	27	109	0.67	2.70
340	FFFFFF	44	153	1.09	3.79
347	FFFF	33	186	0.82	4.61
354	FFFFFFFF	73	259	1.81	6.41
361	FFFFFF	47	306	1.16	7.58
368	FFFFFFFF	82	388	2.03	9.61
375	FFFFFFFFFFFF	109	497	2.70	12.31
382	FFFFFFFFFFFF	103	600	2.55	14.86
390	FFFFFFFFFFFFFFFF	151	751	3.74	18.60
397	FFFFFFFFFFFFFFFF	157	908	3.89	22.49
405	PPPPPPPPPPPPPPPPPPPP	148	1056	3.67	26.15
412	PPPPPPPPPPPPPPPPPPPPPP	195	1251	4.83	30.98
420	PPPPPPPPPPPPPPPPPPPPPP	207	1458	5.13	36.11
429	PPPPPPPPPPPPPPPPPPPPPP	239	1697	5.92	42.03
437	PPPPPPPPPPPPPPPPPPPPPP	239	1936	5.92	47.94
446	PPPPPPPPPPPPPPPPPPPPPP	227	2163	5.62	53.57
455	PPPPPPPPPPPPPPPPPPPPPP	297	2460	7.36	60.92
466	PPPPPPPPPPPPPPPPPPPPPP	255	2715	6.32	67.24
477	PPPPPPPPPPPPPPPPPPPPPP	277	2992	6.86	74.10
489	PPPPPPPPPPPPPPPPPPPPPP	229	3221	5.67	79.77
503	AAAAAAAAAAAAAAAAAAAAAAAA	214	3435	5.30	85.07
520	AAAAAAAAAAAAAAAAAAAAAAAA	207	3642	5.13	90.19
539	AAAAAAAAAAAAAAAAAAAA	129	3771	3.19	93.39
564	AAAAAAAAAAAAAAAAAAAA	120	3891	2.97	96.36
589	AAAAAAAAAAAA	97	3988	2.40	98.76
600	AAAAAA	50	4038	1.24	100.00

MC Core 1 Writing Prompt Core 1

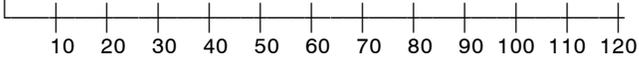
Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
240		2	2	0.01	0.01
258		14	16	0.04	0.05
270		9	25	0.03	0.08
281		16	41	0.05	0.13
289	F	25	66	0.08	0.21
298	F	51	117	0.16	0.37
305	F	67	184	0.21	0.59
312	FF	78	262	0.25	0.83
319	FF	113	375	0.36	1.19
325	FFF	148	523	0.47	1.67
332	FFFF	204	727	0.65	2.32
338	FFFFF	251	978	0.80	3.12
344	FFFFFF	344	1322	1.10	4.21
350	FFFFFFF	446	1768	1.42	5.63
356	FFFFFFFF	555	2323	1.77	7.40
363	FFFFFFFFF	707	3030	2.25	9.65
369	FFFFFFFFF	890	3920	2.83	12.49
375	FFFFFFFFF	984	4904	3.13	15.62
381	FFFFFFFFF	1154	6058	3.68	19.30
387	FFFFFFFFF	1337	7395	4.26	23.55
393	FFFFFFFFF	1464	8859	4.66	28.22
400	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1555	10414	4.95	33.17
406	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1738	12152	5.54	38.71
412	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1782	13934	5.68	44.38
419	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1848	15782	5.89	50.27
426	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1931	17713	6.15	56.42
433	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1990	19703	6.34	62.76
440	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1904	21607	6.06	68.82
448	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1828	23435	5.82	74.65
456	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1668	25103	5.31	79.96
465	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1499	26602	4.77	84.73
475	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1273	27875	4.05	88.79
487	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1068	28943	3.40	92.19
500	AAAAAAAAAAAAAAAAAAAA	883	29826	2.81	95.00
519	AAAAAAAAAAAAAAAAAAAA	700	30526	2.23	97.23
548	AAAAAAAAAAAA	534	31060	1.70	98.93
600	AAAAAAA	335	31395	1.07	100.00

MC Core 1 Writing Prompt Core 2

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
216		4	4	0.01	0.01
245		5	9	0.01	0.03
262		6	15	0.02	0.04
275		13	28	0.04	0.08
285		24	52	0.07	0.15
294	F	41	93	0.12	0.27
302	F	61	154	0.18	0.45
309	F	69	223	0.20	0.65
315	FF	112	335	0.33	0.98
321	FFF	130	465	0.38	1.36
328	FFF	154	619	0.45	1.81
334	FFFFF	236	855	0.69	2.50
340	FFFFFF	288	1143	0.84	3.35
346	FFFFFFF	346	1489	1.01	4.36
351	FFFFFFFFF	439	1928	1.29	5.65
358	FFFFFFFFF	565	2493	1.65	7.30
363	FFFFFFFFF	602	3095	1.76	9.06
369	FFFFFFFFFFF	759	3854	2.22	11.29
375	FFFFFFFFFFF	933	4787	2.73	14.02
381	FFFFFFFFFFF	1053	5840	3.08	17.10
387	FFFFFFFFFFF	1166	7006	3.41	20.52
393	FFFFFFFFFFF	1267	8273	3.71	24.23
399	FFFFFFFFFFF	1486	9759	4.35	28.58
405	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1517	11276	4.44	33.02
412	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1675	12951	4.91	37.93
419	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1860	14811	5.45	43.37
426	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1998	16809	5.85	49.23
433	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	2098	18907	6.14	55.37
441	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	2239	21146	6.56	61.93
450	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	2152	23298	6.30	68.23
460	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	2129	25427	6.23	74.46
470	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1799	27226	5.27	79.73
481	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1671	28897	4.89	84.63
493	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1421	30318	4.16	88.79
507	AAAAAAAAAAAAAAAAAAAAAAAAA	1265	31583	3.70	92.49
526	AAAAAAAAAAAAAAAAAAAAAAAAA	1074	32657	3.15	95.64
553	AAAAAAAAAAAAAAAAAAAAA	871	33528	2.55	98.19
600	AAAAAAAAAAAAA	619	34147	1.81	100.00

MC Core 1 Writing Prompt Core 3

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
216		1	1	0.06	0.06
244	FF	4	5	0.23	0.28
262		1	6	0.06	0.34
274	F	3	9	0.17	0.51
285	FFF	8	17	0.46	0.97
293	FFFF	11	28	0.63	1.59
301	F	3	31	0.17	1.76
309	FFF	7	38	0.40	2.16
315	FFFFFF	15	53	0.85	3.01
322	FFFFFF	14	67	0.80	3.81
328	FFFFFF	16	83	0.91	4.72
334	FFFFFFF	19	102	1.08	5.80
340	FFFFFFF	21	123	1.19	7.00
347	FFFFFFFFF	25	148	1.42	8.42
353	FFFFFFFFF	24	172	1.37	9.78
359	FFFFFFFFFFFFFF	46	218	2.62	12.40
365	FFFFFFFFFFFFFF	47	265	2.67	15.07
370	FFFFFFFFFFFFFF	49	314	2.79	17.86
376	FFFFFFFFFFFFFF	52	366	2.96	20.82
382	FFFFFFFFFFFFFF	67	433	3.81	24.63
388	FFFFFFFFFFFFFF	61	494	3.47	28.10
394	FFFFFFFFFFFFFF	75	569	4.27	32.37
399	FFFFFFFFFFFFFF	70	639	3.98	36.35
405	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	79	718	4.49	40.84
411	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	97	815	5.52	46.36
417	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	119	934	6.77	53.13
423	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	93	1027	5.29	58.42
430	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	97	1124	5.52	63.94
437	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	108	1232	6.14	70.08
444	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	112	1344	6.37	76.45
452	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	84	1428	4.78	81.23
461	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	68	1496	3.87	85.10
471	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	64	1560	3.64	88.74
482	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	68	1628	3.87	92.61
496	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	42	1670	2.39	94.99
514	AAAAAAAAAAAAAAAA	44	1714	2.50	97.50
544	AAAAAAAAAAAA	28	1742	1.59	99.09
600	AAAAAA	16	1758	0.91	100.00

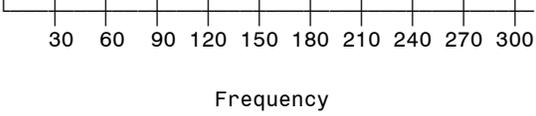


MC Core 2 Writing Prompt Core 1

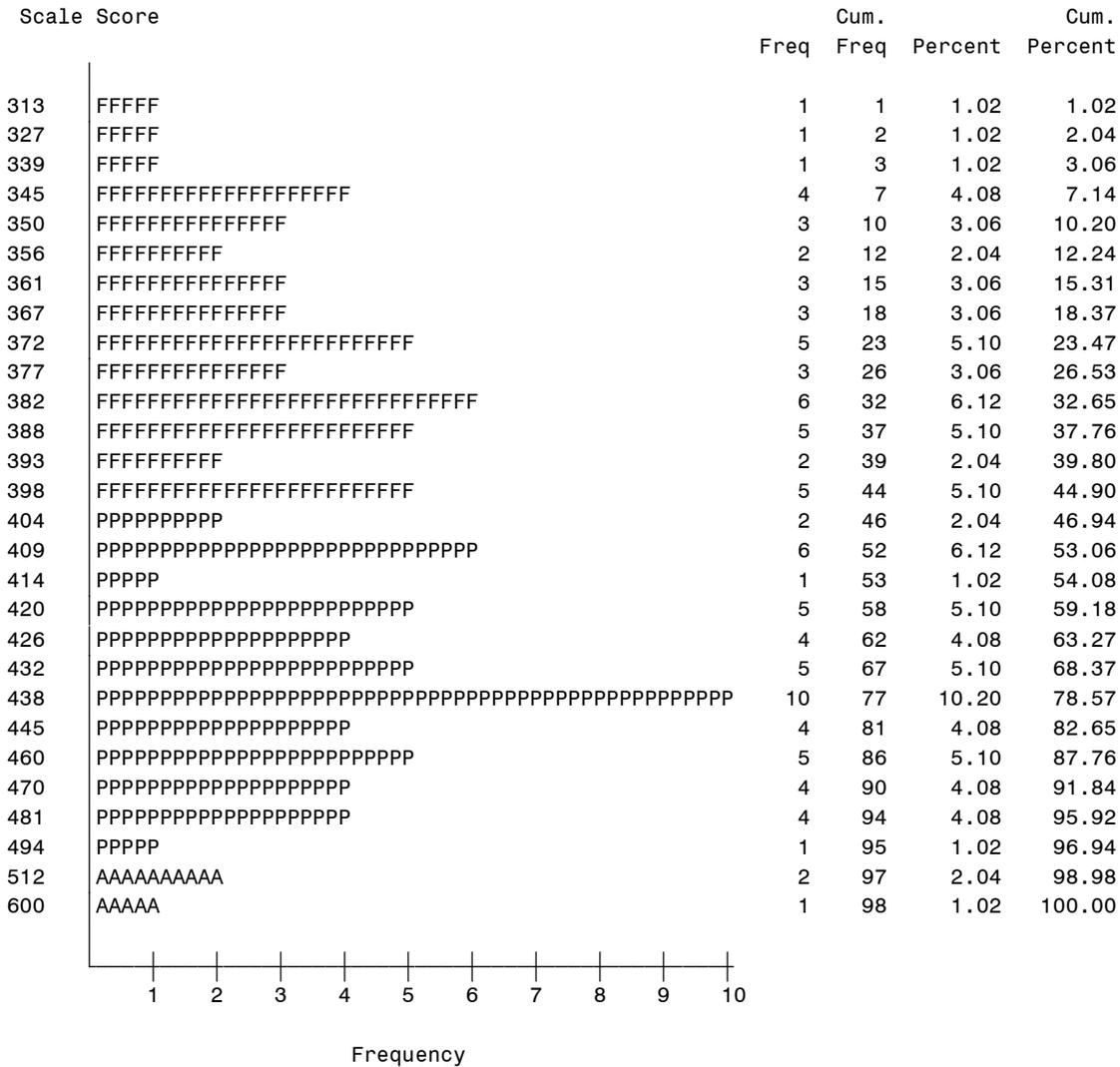
Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
297	F	1	1	0.23	0.23
305	F	1	2	0.23	0.47
319	F	1	3	0.23	0.70
325	F	1	4	0.23	0.94
332	FFFFFFF	8	12	1.87	2.81
337	FFFFF	5	17	1.17	3.98
344	FFFFFFFFF	10	27	2.34	6.32
349	FFFFFFF	6	33	1.41	7.73
355	FFFFFFF	8	41	1.87	9.60
361	FFFFFFFFFFFF	14	55	3.28	12.88
366	FFFFFFFFFFFF	13	68	3.04	15.93
372	FFFFFFFFFFFF	12	80	2.81	18.74
377	FFFFFFFFFFFFFFFF	20	100	4.68	23.42
383	FFFFFFFFFFFFFFFF	16	116	3.75	27.17
389	FFFFFFFFFFFFFFFF	15	131	3.51	30.68
394	FFFFFFFFFFFFFFFFFFFFFFFF	28	159	6.56	37.24
400	PPPPPPPPPPPPPPPPPPPPPP	27	186	6.32	43.56
406	PPPPPPPPPPPPPPPPPPPPPP	24	210	5.62	49.18
412	PPPPPPPPPPPPPPPPPPPPPP	24	234	5.62	54.80
418	PPPPPPPPPPPPPPPPPPPPPP	29	263	6.79	61.59
424	PPPPPPPPPPPPPPPPPPPP	21	284	4.92	66.51
430	PPPPPPPPPPPPPPPPPPPPPP	25	309	5.85	72.37
437	PPPPPPPPPPPPPPPPPPPPPP	24	333	5.62	77.99
444	PPPPPPPPPPPPPP	15	348	3.51	81.50
451	PPPPPPPPPPPPPP	16	364	3.75	85.25
460	PPPPPPPPPPPPPPPP	19	383	4.45	89.70
469	PPPPPPPPPPPPPP	17	400	3.98	93.68
480	PPPPPPPPPP	11	411	2.58	96.25
493	PPPPPPPP	8	419	1.87	98.13
511	AAA	3	422	0.70	98.83
539	AA	2	424	0.47	99.30
600	AAA	3	427	0.70	100.00

MC Core 2 Writing Prompt Core 2

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
184		1	1	0.02	0.02
274		1	2	0.02	0.04
284	F	6	8	0.12	0.16
293	F	5	13	0.10	0.26
302	F	5	18	0.10	0.36
309	FF	15	33	0.30	0.66
316	FF	17	50	0.34	1.01
323	FFF	23	73	0.46	1.47
329	FFFF	33	106	0.66	2.14
335	FFFF	32	138	0.64	2.78
341	FFFFFFF	51	189	1.03	3.81
347	FFFFFFFFF	70	259	1.41	5.22
353	FFFFFFFFFF	81	340	1.63	6.85
359	FFFFFFFFFFFF	94	434	1.89	8.74
365	FFFFFFFFFFFFFF	125	559	2.52	11.26
371	FFFFFFFFFFFFFFFF	129	688	2.60	13.86
376	FFFFFFFFFFFFFFFFF	173	861	3.49	17.35
382	FFFFFFFFFFFFFFFFF	172	1033	3.47	20.81
388	FFFFFFFFFFFFFFFFF	218	1251	4.39	25.21
393	FFFFFFFFFFFFFFFFF	224	1475	4.51	29.72
399	FFFFFFFFFFFFFFFFF	240	1715	4.84	34.56
405	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	278	1993	5.60	40.16
411	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	261	2254	5.26	45.42
417	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	298	2552	6.00	51.42
423	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	309	2861	6.23	57.65
430	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	282	3143	5.68	63.33
437	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	296	3439	5.96	69.29
444	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	299	3738	6.02	75.32
453	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	247	3985	4.98	80.29
461	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	224	4209	4.51	84.81
471	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	185	4394	3.73	88.54
482	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	181	4575	3.65	92.18
495	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	150	4725	3.02	95.20
512	AAAAAAAAAAAAA	106	4831	2.14	97.34
540	AAAAAAAAAAAAA	95	4926	1.91	99.25
600	AAAAA	37	4963	0.75	100.00

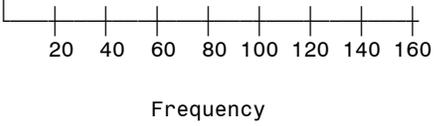


MC Core 2 Writing Prompt Core 3



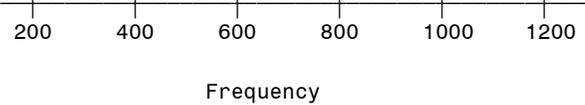
MC Core 3 Writing Prompt Core 1

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
263		1	1	0.04	0.04
276		2	3	0.09	0.13
286		2	5	0.09	0.22
296	F	5	10	0.22	0.44
304	F	5	15	0.22	0.66
311	FF	8	23	0.35	1.01
319	FFFF	18	41	0.79	1.80
325	FFF	13	54	0.57	2.37
332	FFFF	22	76	0.97	3.34
338	FFFFFFF	39	115	1.71	5.05
344	FFFFFFF	40	155	1.76	6.81
350	FFFFFFFFF	58	213	2.55	9.36
356	FFFFFFFFF	62	275	2.72	12.08
362	FFFFFFFFF	81	356	3.56	15.64
367	FFFFFFFFF	97	453	4.26	19.90
373	FFFFFFFFF	106	559	4.66	24.56
379	FFFFFFFFF	103	662	4.53	29.09
384	FFFFFFFFF	158	820	6.94	36.03
389	FFFFFFFFF	130	950	5.71	41.74
395	FFFFFFFFF	121	1071	5.32	47.06
401	PPPPPPPPPPPPPPPPPPPPPP	120	1191	5.27	52.33
406	PPPPPPPPPPPPPPPPPPPPPP	122	1313	5.36	57.69
412	PPPPPPPPPPPPPPPPPPPPPP	114	1427	5.01	62.70
418	PPPPPPPPPPPPPPPPPPPPPP	120	1547	5.27	67.97
424	PPPPPPPPPPPPPPPPPPPPPP	104	1651	4.57	72.54
430	PPPPPPPPPPPPPPPPPPPPPP	120	1771	5.27	77.81
436	PPPPPPPPPPPPPPPPPPPPPP	100	1871	4.39	82.21
443	PPPPPPPPPPPPPPPPPPPPPP	91	1962	4.00	86.20
450	PPPPPPPPPPPP	65	2027	2.86	89.06
458	PPPPPPPPPPPP	67	2094	2.94	92.00
468	PPPPPPPP	41	2135	1.80	93.80
478	PPPPPPPP	46	2181	2.02	95.83
491	PPPPPPPP	37	2218	1.63	97.45
509	AAAAAA	29	2247	1.27	98.73
537	AAAA	19	2266	0.83	99.56
600	AA	10	2276	0.44	100.00



MC Core 1 Writing Prompt Core 1

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
214		1	1	0.00	0.00
253		2	3	0.01	0.01
266		1	4	0.00	0.02
277		3	7	0.01	0.03
286	F	15	22	0.06	0.09
295	F	19	41	0.08	0.17
302	F	26	67	0.11	0.28
309	F	31	98	0.13	0.41
315	FF	53	151	0.22	0.64
321	FF	56	207	0.24	0.87
327	FFF	66	273	0.28	1.15
333	FFFF	92	365	0.39	1.54
339	FFFFF	117	482	0.49	2.03
344	FFFFFF	129	611	0.54	2.58
350	FFFFFFF	174	785	0.73	3.31
355	FFFFFFF	225	1010	0.95	4.26
360	FFFFFFF	256	1266	1.08	5.34
365	FFFFFFF	299	1565	1.26	6.60
371	FFFFFFF	334	1899	1.41	8.01
376	FFFFFFF	366	2265	1.54	9.56
381	FFFFFFF	443	2708	1.87	11.43
386	FFFFFFF	510	3218	2.15	13.58
392	FFFFFFF	557	3775	2.35	15.93
396	FFFFFFF	674	4449	2.84	18.78
402	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	710	5159	3.00	21.77
407	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	834	5993	3.52	25.29
412	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	864	6857	3.65	28.94
417	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	945	7802	3.99	32.93
423	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	970	8772	4.09	37.02
428	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1049	9821	4.43	41.45
434	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1021	10842	4.31	45.75
440	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1175	12017	4.96	50.71
446	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1284	13301	5.42	56.13
452	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1280	14581	5.40	61.53
458	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1198	15779	5.06	66.59
465	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1212	16991	5.11	71.70
472	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1149	18140	4.85	76.55
480	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1138	19278	4.80	81.36
489	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1013	20291	4.27	85.63
498	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	842	21133	3.55	89.18
508	AAAAAAAAAAAAAAAAAAAAAAAAAAAA	758	21891	3.20	92.38
521	AAAAAAAAAAAAAAAAAAAAAAAAAAAA	588	22479	2.48	94.86
535	AAAAAAAAAAAAAAAAAAAAAAAAAAAA	511	22990	2.16	97.02
555	AAAAAAAAAAAA	354	23344	1.49	98.51
586	AAAAAAAA	235	23579	0.99	99.51
600	AAAAA	117	23696	0.49	100.00

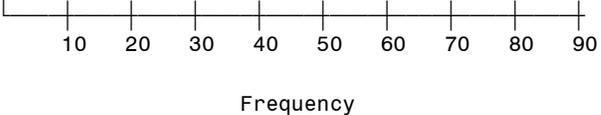


MC Core 1 Writing Prompt Core 2

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0		1	1	0.00	0.00
151		1	2	0.00	0.01
250		2	4	0.01	0.02
262		6	10	0.02	0.04
272		11	21	0.04	0.08
282		11	32	0.04	0.13
290		13	45	0.05	0.18
297	F	32	77	0.13	0.30
304	F	37	114	0.15	0.45
311	F	39	153	0.15	0.60
317	F	51	204	0.20	0.81
323	F	69	273	0.27	1.08
329	FF	88	361	0.35	1.43
335	FF	108	469	0.43	1.85
341	FFF	130	599	0.51	2.37
347	FFF	165	764	0.65	3.02
353	FFFF	217	981	0.86	3.88
358	FFFFF	232	1213	0.92	4.79
364	FFFFF	272	1485	1.07	5.87
370	FFFFFF	326	1811	1.29	7.15
375	FFFFFFF	381	2192	1.50	8.66
380	FFFFFFF	394	2586	1.56	10.21
386	FFFFFFFF	537	3123	2.12	12.34
391	FFFFFFFF	527	3650	2.08	14.42
396	FFFFFFFF	616	4266	2.43	16.85
402	PPPPPPPPPP	626	4892	2.47	19.32
407	PPPPPPPPPP	755	5647	2.98	22.31
412	PPPPPPPPPP	787	6434	3.11	25.41
417	PPPPPPPPPP	848	7282	3.35	28.76
423	PPPPPPPPPP	987	8269	3.90	32.66
428	PPPPPPPPPP	960	9229	3.79	36.46
433	PPPPPPPPPP	1132	10361	4.47	40.93
439	PPPPPPPPPP	1166	11527	4.61	45.53
445	PPPPPPPPPP	1184	12711	4.68	50.21
451	PPPPPPPPPP	1285	13996	5.08	55.29
458	PPPPPPPPPP	1326	15322	5.24	60.52
465	PPPPPPPPPP	1382	16704	5.46	65.98
472	PPPPPPPPPP	1391	18095	5.49	71.48
479	PPPPPPPPPP	1406	19501	5.55	77.03
488	PPPPPPPPPP	1230	20731	4.86	81.89
497	PPPPPPPPPP	1141	21872	4.51	86.40
507	AAAAAAAAAAAA	991	22863	3.91	90.31
518	AAAAAAAAAAAA	844	23707	3.33	93.64
532	AAAAAAAAAAAA	628	24335	2.48	96.12
550	AAAAAAAAAA	520	24855	2.05	98.18
580	AAAAAAA	329	25184	1.30	99.48
600	AAA	132	25316	0.52	100.00

MC Core 2 Writing Prompt Core 1

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
182	F	1	1	0.06	0.06
238	F	1	2	0.06	0.11
277	F	2	4	0.11	0.23
286	F	1	5	0.06	0.29
294	FFF	5	10	0.29	0.57
301	F	2	12	0.11	0.69
308	FFF	5	17	0.29	0.97
314	FFFFF	9	26	0.52	1.49
320	FFFF	8	34	0.46	1.95
325	FFFF	8	42	0.46	2.41
330	FFFFFFF	13	55	0.74	3.15
336	FFFFFFF	12	67	0.69	3.84
341	FFFFFFF	16	83	0.92	4.76
346	FFFFFFFFF	21	104	1.20	5.96
351	FFFFFFFFF	22	126	1.26	7.22
356	FFFFFFFFFFFF	27	153	1.55	8.77
361	FFFFFFFFFFFF	37	190	2.12	10.89
366	FFFFFFFFFFFF	37	227	2.12	13.01
371	FFFFFFFFFFFF	31	258	1.78	14.79
376	FFFFFFFFFFFF	45	303	2.58	17.36
381	FFFFFFFFFFFF	54	357	3.09	20.46
387	FFFFFFFFFFFF	54	411	3.09	23.55
392	FFFFFFFFFFFF	57	468	3.27	26.82
397	FFFFFFFFFFFF	63	531	3.61	30.43
402	PP	77	608	4.41	34.84
408	PP	67	675	3.84	38.68
413	PP	61	736	3.50	42.18
419	PP	65	801	3.72	45.90
424	PP	83	884	4.76	50.66
430	PP	84	968	4.81	55.47
436	PP	90	1058	5.16	60.63
442	PP	72	1130	4.13	64.76
449	PP	81	1211	4.64	69.40
456	PP	76	1287	4.36	73.75
463	PP	64	1351	3.67	77.42
471	PP	83	1434	4.76	82.18
479	PP	59	1493	3.38	85.56
489	PP	58	1551	3.32	88.88
499	AAAAAAAAAAAAAAAAAAAA	46	1597	2.64	91.52
511	AAAAAAAAAAAAAAAAAAAA	35	1632	2.01	93.52
524	AAAAAAAAAAAAAAAAAAAA	29	1661	1.66	95.19
538	AAAAAAAAAAAAAAAAAAAA	29	1690	1.66	96.85
558	AAAAAAAAAAAAAAAAAAAA	29	1719	1.66	98.51
588	AAAAAAA	15	1734	0.86	99.37
600	AAAAAA	11	1745	0.63	100.00



Frequency

MC Core 2 Writing Prompt Core 2

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
211		1	1	0.02	0.02
247		1	2	0.02	0.03
259		1	3	0.02	0.05
269		2	5	0.03	0.08
278		3	8	0.05	0.13
286	F	8	16	0.13	0.26
293	F	9	25	0.14	0.40
300	F	8	33	0.13	0.53
306	FF	13	46	0.21	0.74
312	FF	18	64	0.29	1.03
317	FFF	21	85	0.34	1.37
323	FFFF	33	118	0.53	1.90
329	FFFFF	34	152	0.55	2.44
334	FFFF	29	181	0.47	2.91
339	FFFFF	41	222	0.66	3.57
345	FFFFFF	53	275	0.85	4.42
350	FFFFFF	44	319	0.71	5.13
355	FFFFFFF	65	384	1.05	6.17
361	FFFFFFF	79	463	1.27	7.44
366	FFFFFFF	87	550	1.40	8.84
371	FFFFFFF	126	676	2.03	10.87
376	FFFFFFF	114	790	1.83	12.70
382	FFFFFFF	128	918	2.06	14.76
387	FFFFFFF	154	1072	2.48	17.23
392	FFFFFFF	163	1235	2.62	19.86
398	FFFFFFF	165	1400	2.65	22.51
403	PPPPPPPPPPPPPPPPPPPPPP	184	1584	2.96	25.47
409	PPPPPPPPPPPPPPPPPPPPPP	181	1765	2.91	28.38
414	PPPPPPPPPPPPPPPPPPPPPP	218	1983	3.50	31.88
420	PPPPPPPPPPPPPPPPPPPPPP	258	2241	4.15	36.03
426	PPPPPPPPPPPPPPPPPPPPPP	261	2502	4.20	40.23
432	PPPPPPPPPPPPPPPPPPPPPP	276	2778	4.44	44.66
438	PPPPPPPPPPPPPPPPPPPPPP	277	3055	4.45	49.12
445	PPPPPPPPPPPPPPPPPPPPPP	272	3327	4.37	53.49
452	PPPPPPPPPPPPPPPPPPPPPP	318	3645	5.11	58.60
459	PPPPPPPPPPPPPPPPPPPPPP	328	3973	5.27	63.87
467	PPPPPPPPPPPPPPPPPPPPPP	352	4325	5.66	69.53
475	PPPPPPPPPPPPPPPPPPPPPP	361	4686	5.80	75.34
484	PPPPPPPPPPPPPPPPPPPPPP	322	5008	5.18	80.51
494	PPPPPPPPPPPPPPPPPPPPPP	295	5303	4.74	85.26
505	AAAAAAAAAAAAAAAAAAAAAAAA	268	5571	4.31	89.57
518	AAAAAAAAAAAAAAAAAAAAAAAA	216	5787	3.47	93.04
533	AAAAAAAAAAAAAAAAAAAAAAAA	179	5966	2.88	95.92
552	AAAAAAAAAAAAAAAAAAAA	132	6098	2.12	98.04
583	AAAAAAAAAA	84	6182	1.35	99.39
600	AAAAA	38	6220	0.61	100.00

Frequency

APPENDIX C

SOL Item Analysis for Multiple Choice and Direct Writing Assessments

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.44	0.37	0.94	0.05
2	0.72	0.23	-0.48	0.05
3	0.87	0.41	-1.51	0.07
4	0.62	0.31	0.09	0.05
5	0.53	0.29	0.50	0.05
6	0.46	0.40	0.85	0.05
7	0.45	0.28	0.89	0.05
8	0.82	0.52	-1.12	0.06
9	0.60	0.41	0.15	0.05
10	0.47	0.33	0.81	0.05
11	0.75	0.49	-0.66	0.05
12	0.60	0.48	0.14	0.05
13	0.60	0.38	0.19	0.05
14	0.69	0.46	-0.30	0.05
15	0.82	0.46	-1.16	0.06
16	0.75	0.45	-0.67	0.05
17	0.87	0.46	-1.59	0.07
18	0.52	0.37	0.56	0.05
19	0.90	0.47	-1.88	0.07
20	0.86	0.36	-1.44	0.06
21	0.93	0.42	-2.22	0.08
22	0.68	0.31	-0.23	0.05
23	0.48	0.34	0.72	0.05
24	0.64	0.41	-0.02	0.05
25	0.57	0.47	0.32	0.05
26	0.65	0.54	-0.11	0.05
27	0.57	0.48	0.32	0.05
28	0.77	0.47	-0.80	0.05
29	0.45	0.23	0.87	0.05
30	0.36	0.33	1.34	0.05
31	0.70	0.45	-0.34	0.05
32	0.50	0.39	0.63	0.05
33	0.47	0.25	0.78	0.05
34	0.63	0.39	0.03	0.05
35	0.69	0.48	-0.27	0.05
36	0.61	0.55	0.13	0.05
37	0.68	0.51	-0.23	0.05
38	0.42	0.31	1.02	0.05
39	0.43	0.46	1.00	0.05
40	0.40	0.27	1.14	0.05
41	0.41	0.31	1.10	0.05
42	0.62	0.52	0.08	0.05
Mean	0.62	0.40	-0.01	0.05

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.67	0.36	-1.08	0.06
2	0.32	0.29	0.52	0.06
3	0.47	0.29	-0.17	0.06
4	0.56	0.30	-0.57	0.06
5	0.58	0.29	-0.65	0.06
6	0.57	0.35	-0.61	0.06
7	0.44	0.42	-0.04	0.06
8	0.25	0.22	0.92	0.07
9	0.28	0.43	0.75	0.06
10	0.31	0.45	0.60	0.06
11	0.41	0.33	0.12	0.06
12	0.45	0.31	-0.08	0.06
13	0.44	0.28	-0.02	0.06
14	0.24	0.15	0.97	0.07
15	0.43	0.39	0.03	0.06
16	0.42	0.43	0.04	0.06
17	0.50	0.11	-0.29	0.06
18	0.35	0.25	0.40	0.06
19	0.60	0.42	-0.75	0.06
20	0.43	0.32	-0.01	0.06
21	0.48	0.40	-0.21	0.06
22	0.44	0.26	-0.02	0.06
23	0.60	0.30	-0.74	0.06
24	0.23	0.43	1.03	0.07
25	0.47	0.43	-0.17	0.06
26	0.44	0.36	-0.04	0.06
27	0.18	0.29	1.41	0.08
28	0.43	0.44	0.03	0.06
29	0.70	0.41	-1.22	0.06
30	0.26	0.47	0.85	0.07
31	0.44	0.38	-0.05	0.06
32	0.37	0.38	0.31	0.06
33	0.51	0.41	-0.34	0.06
34	0.45	0.20	-0.07	0.06
35	0.41	0.31	0.08	0.06
36	0.37	0.36	0.29	0.06
37	0.32	0.36	0.54	0.06
38	0.39	0.40	0.19	0.06
39	0.33	0.31	0.49	0.06
40	0.21	0.28	1.16	0.07
41	0.20	0.05	1.23	0.07
42	0.51	0.16	-0.34	0.06
43	0.68	0.42	-1.11	0.06
44	0.71	0.41	-1.25	0.06
45	0.68	0.44	-1.13	0.06
46	0.47	0.32	-0.19	0.06
47	0.59	0.34	-0.70	0.06
48	0.38	0.29	0.23	0.06
49	0.29	0.28	0.71	0.06
50	0.41	0.27	0.10	0.06
Mean	0.43	0.33	0.02	0.06

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.76	0.51	-1.02	0.06
2	0.74	0.41	-0.93	0.06
3	0.85	0.42	-1.63	0.07
4	0.89	0.36	-2.05	0.08
5	0.57	0.51	-0.08	0.05
6	0.81	0.36	-1.34	0.06
7	0.77	0.32	-1.07	0.06
8	0.49	0.44	0.32	0.05
9	0.57	0.36	-0.05	0.05
10	0.58	0.43	-0.10	0.05
11	0.52	0.36	0.15	0.05
12	0.79	0.24	-1.25	0.06
13	0.50	0.24	0.26	0.05
14	0.38	0.33	0.84	0.05
15	0.44	0.30	0.54	0.05
16	0.54	0.37	0.09	0.05
17	0.62	0.45	-0.29	0.05
18	0.45	0.43	0.47	0.05
19	0.70	0.47	-0.71	0.06
20	0.47	0.43	0.42	0.05
21	0.46	0.48	0.46	0.05
22	0.41	0.37	0.69	0.05
23	0.40	0.29	0.72	0.05
24	0.39	0.28	0.77	0.05
25	0.52	0.40	0.18	0.05
26	0.49	0.32	0.29	0.05
27	0.62	0.48	-0.32	0.05
28	0.64	0.44	-0.40	0.05
29	0.85	0.35	-1.63	0.07
30	0.27	0.20	1.38	0.06
31	0.29	0.35	1.29	0.06
32	0.61	0.39	-0.24	0.05
33	0.48	0.28	0.36	0.05
34	0.70	0.36	-0.72	0.06
35	0.46	0.43	0.46	0.05
36	0.48	0.37	0.33	0.05
37	0.36	0.26	0.91	0.05
38	0.47	0.35	0.38	0.05
39	0.40	0.37	0.73	0.05
40	0.56	0.37	-0.02	0.05
41	0.39	0.22	0.75	0.05
42	0.52	0.39	0.18	0.05
43	0.43	0.25	0.59	0.05
44	0.56	0.29	0.00	0.05
45	0.40	0.27	0.74	0.05
Mean	0.55	0.36	0.01	0.05

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.71	0.36	-0.91	0.06
2	0.86	0.30	-1.85	0.08
3	0.36	0.35	0.67	0.06
4	0.60	0.33	-0.38	0.06
5	0.42	0.35	0.42	0.06
6	0.59	0.30	-0.35	0.06
7	0.60	0.33	-0.40	0.06
8	0.26	0.16	1.21	0.07
9	0.58	0.38	-0.30	0.06
10	0.66	0.31	-0.68	0.06
11	0.55	0.38	-0.17	0.06
12	0.61	0.26	-0.45	0.06
13	0.73	0.37	-1.02	0.06
14	0.48	0.36	0.13	0.06
15	0.39	0.34	0.56	0.06
16	0.23	0.32	1.40	0.07
17	0.25	0.17	1.26	0.07
18	0.33	0.24	0.84	0.06
19	0.65	0.19	-0.64	0.06
20	0.56	0.18	-0.20	0.06
21	0.72	0.26	-0.98	0.06
22	0.69	0.39	-0.80	0.06
23	0.50	0.30	0.07	0.06
24	0.47	0.33	0.21	0.06
25	0.56	0.34	-0.20	0.06
26	0.35	0.21	0.71	0.06
27	0.77	0.42	-1.27	0.07
28	0.46	0.31	0.23	0.06
29	0.56	0.39	-0.22	0.06
30	0.29	0.32	1.05	0.06
31	0.50	0.41	0.06	0.06
32	0.65	0.42	-0.61	0.06
33	0.40	0.32	0.51	0.06
34	0.48	0.33	0.15	0.06
35	0.81	0.34	-1.51	0.07
36	0.36	0.17	0.70	0.06
37	0.45	0.31	0.27	0.06
38	0.70	0.40	-0.86	0.06
39	0.50	0.28	0.04	0.06
40	0.61	0.32	-0.45	0.06
41	0.38	0.39	0.58	0.06
42	0.33	0.18	0.84	0.06
43	0.39	0.25	0.53	0.06
44	0.37	0.31	0.63	0.06
45	0.42	0.27	0.42	0.06
46	0.50	0.35	0.07	0.06
47	0.42	0.38	0.39	0.06
48	0.41	0.30	0.45	0.06
49	0.54	0.35	-0.12	0.06
50	0.44	0.36	0.33	0.06
Mean	0.51	0.31	0.01	0.06

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.52	0.47	-0.15	0.05
2	0.56	0.42	-0.31	0.05
3	0.44	0.38	0.24	0.05
4	0.65	0.41	-0.76	0.05
5	0.88	0.27	-2.27	0.07
6	0.21	0.17	1.46	0.06
7	0.58	0.54	-0.42	0.05
8	0.69	0.48	-0.97	0.05
9	0.70	0.40	-0.97	0.05
10	0.56	0.31	-0.34	0.05
11	0.47	0.50	0.10	0.05
12	0.72	0.45	-1.10	0.05
13	0.56	0.38	-0.32	0.05
14	0.61	0.25	-0.56	0.05
15	0.72	0.23	-1.09	0.05
16	0.39	0.37	0.44	0.05
17	0.35	0.47	0.63	0.05
18	0.58	0.38	-0.40	0.05
19	0.58	0.38	-0.44	0.05
20	0.35	0.26	0.66	0.05
21	0.40	0.35	0.39	0.05
22	0.45	0.30	0.16	0.05
23	0.59	0.17	-0.46	0.05
24	0.59	0.32	-0.48	0.05
25	0.46	0.28	0.13	0.05
26	0.77	0.43	-1.38	0.05
27	0.61	0.43	-0.56	0.05
28	0.39	0.27	0.44	0.05
29	0.49	0.39	-0.01	0.05
30	0.32	0.21	0.78	0.05
31	0.33	0.32	0.76	0.05
32	0.36	0.12	0.60	0.05
33	0.42	0.26	0.29	0.05
34	0.24	0.18	1.22	0.05
35	0.71	0.42	-1.07	0.05
36	0.52	0.35	-0.13	0.05
37	0.62	0.29	-0.63	0.05
38	0.63	0.45	-0.65	0.05
39	0.37	0.23	0.54	0.05
40	0.31	0.33	0.84	0.05
41	0.49	0.40	0.01	0.05
42	0.33	0.20	0.73	0.05
43	0.54	0.44	-0.25	0.05
44	0.59	0.32	-0.44	0.05
45	0.34	0.37	0.71	0.05
46	0.37	0.28	0.53	0.05
47	0.56	0.40	-0.33	0.05
48	0.42	0.42	0.32	0.05
49	0.37	0.36	0.54	0.05
50	0.56	0.41	-0.32	0.05
51	0.31	0.42	0.83	0.05
52	0.37	0.29	0.57	0.05
53	0.51	0.42	-0.10	0.05
54	0.47	0.23	0.08	0.05
55	0.39	0.49	0.44	0.05
56	0.83	0.37	-1.81	0.06
57	0.43	0.47	0.27	0.05
58	0.57	0.42	-0.39	0.05
59	0.32	0.38	0.78	0.05
60	0.28	0.17	1.00	0.05
61	0.22	0.21	1.37	0.06
Mean	0.49	0.35	-0.02	0.05

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.72	0.31	-0.98	0.05
2	0.80	0.43	-1.44	0.06
3	0.67	0.36	-0.72	0.05
4	0.50	0.35	0.07	0.05
5	0.65	0.48	-0.61	0.05
6	0.49	0.31	0.14	0.05
7	0.64	0.45	-0.58	0.05
8	0.66	0.49	-0.67	0.05
9	0.67	0.41	-0.73	0.05
10	0.59	0.53	-0.31	0.05
11	0.44	0.41	0.37	0.05
12	0.42	0.40	0.44	0.05
13	0.51	0.34	0.04	0.05
14	0.30	0.21	1.04	0.05
15	0.50	0.38	0.10	0.05
16	0.70	0.30	-0.85	0.05
17	0.27	0.15	1.20	0.05
18	0.46	0.20	0.26	0.05
19	0.55	0.43	-0.14	0.05
20	0.60	0.44	-0.38	0.05
21	0.29	0.16	1.08	0.05
22	0.44	0.36	0.37	0.05
23	0.48	0.34	0.18	0.05
24	0.41	0.25	0.49	0.05
25	0.45	0.28	0.32	0.05
26	0.40	0.33	0.53	0.05
27	0.51	0.34	0.03	0.05
28	0.54	0.13	-0.09	0.05
29	0.30	0.21	1.02	0.05
30	0.46	0.46	0.25	0.05
31	0.58	0.40	-0.28	0.05
32	0.33	0.37	0.90	0.05
33	0.40	0.22	0.53	0.05
34	0.56	0.50	-0.19	0.05
35	0.64	0.43	-0.55	0.05
36	0.65	0.48	-0.64	0.05
37	0.49	0.44	0.12	0.05
38	0.55	0.35	-0.13	0.05
39	0.41	0.25	0.47	0.05
40	0.58	0.55	-0.30	0.05
41	0.50	0.38	0.08	0.05
42	0.56	0.45	-0.19	0.05
43	0.77	0.43	-1.25	0.05
44	0.68	0.47	-0.77	0.05
45	0.38	0.13	0.62	0.05
46	0.79	0.45	-1.40	0.06
47	0.48	0.40	0.19	0.05
48	0.73	0.25	-1.02	0.05
49	0.49	0.33	0.14	0.05
50	0.36	0.21	0.71	0.05
51	0.57	0.30	-0.24	0.05
52	0.55	0.33	-0.13	0.05
53	0.56	0.54	-0.20	0.05
54	0.29	0.11	1.08	0.05
55	0.21	0.13	1.59	0.06
56	0.42	0.23	0.47	0.05
57	0.41	0.47	0.51	0.05
58	0.57	0.32	-0.26	0.05
59	0.31	0.26	0.99	0.05
60	0.54	0.37	-0.08	0.05
61	0.50	0.46	0.08	0.05
Mean	0.51	0.35	0.02	0.05

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.89	0.30	-2.32	0.10
2	0.59	0.43	-0.44	0.06
3	0.47	0.42	0.10	0.06
4	0.29	0.24	0.94	0.07
5	0.62	0.31	-0.56	0.07
6	0.51	0.40	-0.08	0.06
7	0.49	0.34	0.01	0.06
8	0.48	0.40	0.04	0.06
9	0.74	0.39	-1.18	0.07
10	0.62	0.39	-0.56	0.07
11	0.58	0.37	-0.37	0.06
12	0.47	0.24	0.10	0.06
13	0.62	0.29	-0.55	0.07
14	0.49	0.31	0.02	0.06
15	0.45	0.27	0.19	0.06
16	0.63	0.45	-0.63	0.07
17	0.44	0.42	0.24	0.06
18	0.38	0.18	0.52	0.07
19	0.51	0.50	-0.06	0.06
20	0.17	0.21	1.72	0.08
21	0.70	0.31	-0.97	0.07
22	0.53	0.38	-0.14	0.06
23	0.30	0.23	0.91	0.07
24	0.73	0.35	-1.09	0.07
25	0.56	0.44	-0.29	0.06
26	0.55	0.47	-0.23	0.06
27	0.39	0.30	0.45	0.07
28	0.31	0.09	0.86	0.07
29	0.42	0.27	0.34	0.06
30	0.47	0.20	0.12	0.06
31	0.42	0.27	0.32	0.06
32	0.56	0.39	-0.28	0.06
33	0.40	0.35	0.42	0.06
34	0.55	0.32	-0.25	0.06
35	0.40	0.10	0.43	0.07
36	0.77	0.38	-1.33	0.07
37	0.34	0.29	0.69	0.07
38	0.48	0.43	0.04	0.06
39	0.42	0.49	0.33	0.06
40	0.47	0.33	0.12	0.06
41	0.40	0.23	0.40	0.06
42	0.55	0.42	-0.27	0.06
43	0.60	0.49	-0.47	0.06
44	0.34	0.33	0.70	0.07
45	0.71	0.25	-1.00	0.07
46	0.56	0.36	-0.28	0.06
47	0.47	0.38	0.12	0.06
48	0.61	0.51	-0.54	0.07
49	0.38	0.20	0.52	0.07
50	0.38	0.09	0.51	0.07
51	0.50	0.28	-0.04	0.06
52	0.54	0.42	-0.21	0.06
53	0.38	0.26	0.51	0.07
54	0.42	0.29	0.34	0.06
55	0.57	0.45	-0.33	0.06
56	0.55	0.42	-0.24	0.06
57	0.27	0.24	1.05	0.07
58	0.46	0.35	0.15	0.06
59	0.40	0.17	0.42	0.06
60	0.32	0.19	0.82	0.07
61	0.46	0.47	0.16	0.06
62	0.38	0.08	0.50	0.07
63	0.32	0.22	0.80	0.07
Mean	0.49	0.32	0.02	0.07

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.74	0.25	-0.72	0.05
2	0.76	0.43	-0.81	0.05
3	0.79	0.42	-1.02	0.05
4	0.60	0.12	-0.02	0.04
5	0.50	0.20	0.42	0.04
6	0.81	0.36	-1.18	0.05
7	0.63	0.29	-0.15	0.04
8	0.81	0.31	-1.12	0.05
9	0.64	0.50	-0.19	0.04
10	0.59	0.28	0.03	0.04
11	0.74	0.49	-0.69	0.05
12	0.72	0.13	-0.58	0.05
13	0.49	0.29	0.47	0.04
14	0.66	0.34	-0.32	0.04
15	0.40	0.32	0.90	0.04
16	0.91	0.30	-2.10	0.07
17	0.54	0.33	0.27	0.04
18	0.81	0.34	-1.16	0.05
19	0.52	0.36	0.34	0.04
20	0.55	0.35	0.21	0.04
21	0.77	0.33	-0.90	0.05
22	0.58	0.32	0.09	0.04
23	0.71	0.41	-0.55	0.05
24	0.28	0.32	1.49	0.05
25	0.59	0.28	0.03	0.04
26	0.58	0.27	0.10	0.04
27	0.66	0.40	-0.28	0.04
28	0.59	0.36	0.05	0.04
29	0.65	0.42	-0.24	0.04
30	0.72	0.34	-0.62	0.05
31	0.60	0.30	0.00	0.04
32	0.38	0.27	1.00	0.04
33	0.46	0.41	0.61	0.04
34	0.35	0.39	1.14	0.04
35	0.46	0.29	0.63	0.04
36	0.49	0.27	0.47	0.04
37	0.34	0.30	1.18	0.04
38	0.41	0.23	0.87	0.04
39	0.37	0.32	1.04	0.04
40	0.60	0.37	0.00	0.04
41	0.40	0.43	0.88	0.04
42	0.49	0.48	0.49	0.04
43	0.39	0.38	0.96	0.04
44	0.55	0.39	0.20	0.04
45	0.40	0.24	0.90	0.04
46	0.51	0.48	0.37	0.04
47	0.33	0.37	1.21	0.04
48	0.53	0.44	0.32	0.04
49	0.37	0.28	1.01	0.04
50	0.33	0.07	1.25	0.05
Mean	0.56	0.33	0.12	0.04

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.95	0.20	-2.83	0.10
2	0.97	0.19	-3.38	0.13
3	0.78	0.46	-0.98	0.05
4	0.94	0.26	-2.54	0.09
5	0.77	0.30	-0.91	0.05
6	0.84	0.41	-1.40	0.06
7	0.52	0.40	0.36	0.04
8	0.66	0.41	-0.32	0.05
9	0.58	0.32	0.09	0.04
10	0.75	0.42	-0.77	0.05
11	0.81	0.38	-1.15	0.05
12	0.55	0.38	0.21	0.04
13	0.68	0.27	-0.44	0.05
14	0.50	0.24	0.43	0.04
15	0.63	0.48	-0.19	0.05
16	0.58	0.43	0.07	0.04
17	0.78	0.23	-0.97	0.05
18	0.57	0.31	0.13	0.04
19	0.50	0.34	0.43	0.04
20	0.66	0.32	-0.34	0.05
21	0.44	0.31	0.72	0.04
22	0.67	0.49	-0.38	0.05
23	0.49	0.43	0.46	0.04
24	0.78	0.41	-0.99	0.05
25	0.68	0.46	-0.40	0.05
26	0.37	0.19	1.04	0.05
27	0.57	0.40	0.10	0.04
28	0.32	0.21	1.31	0.05
29	0.64	0.43	-0.20	0.05
30	0.58	0.40	0.06	0.04
31	0.74	0.43	-0.75	0.05
32	0.56	0.22	0.18	0.04
33	0.36	0.33	1.10	0.05
34	0.53	0.40	0.31	0.04
35	0.42	0.44	0.79	0.04
36	0.42	0.39	0.80	0.04
37	0.56	0.37	0.19	0.04
38	0.47	0.34	0.59	0.04
39	0.49	0.15	0.49	0.04
40	0.42	0.24	0.82	0.04
41	0.45	0.45	0.67	0.04
42	0.70	0.50	-0.52	0.05
43	0.44	0.48	0.70	0.04
44	0.45	0.33	0.66	0.04
45	0.47	0.24	0.59	0.04
46	0.33	0.32	1.22	0.05
47	0.48	0.19	0.52	0.04
48	0.43	0.28	0.73	0.04
49	0.51	0.33	0.39	0.04
50	0.53	0.43	0.30	0.04
Mean	0.59	0.35	-0.06	0.05

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.82	0.28	-1.48	0.08
2	0.70	0.33	-0.79	0.06
3	0.66	0.16	-0.61	0.06
4	0.74	0.41	-1.00	0.07
5	0.66	0.34	-0.60	0.06
6	0.65	0.24	-0.55	0.06
7	0.64	0.35	-0.50	0.06
8	0.54	0.35	-0.05	0.06
9	0.40	0.32	0.57	0.06
10	0.53	0.41	0.00	0.06
11	0.58	0.41	-0.21	0.06
12	0.77	0.30	-1.17	0.07
13	0.70	0.35	-0.78	0.06
14	0.55	0.14	-0.10	0.06
15	0.59	0.36	-0.26	0.06
16	0.39	0.35	0.63	0.06
17	0.48	0.29	0.23	0.06
18	0.65	0.41	-0.54	0.06
19	0.70	0.38	-0.79	0.06
20	0.83	0.37	-1.59	0.08
21	0.25	0.24	1.34	0.07
22	0.55	0.28	-0.11	0.06
23	0.36	0.27	0.77	0.06
24	0.36	0.20	0.76	0.06
25	0.64	0.37	-0.50	0.06
26	0.24	0.36	1.38	0.07
27	0.30	0.13	1.06	0.07
28	0.59	0.38	-0.25	0.06
29	0.75	0.26	-1.07	0.07
30	0.42	0.31	0.46	0.06
31	0.50	0.20	0.11	0.06
32	0.74	0.17	-0.99	0.07
33	0.63	0.35	-0.43	0.06
34	0.76	0.40	-1.11	0.07
35	0.62	0.23	-0.41	0.06
36	0.42	0.43	0.49	0.06
37	0.51	0.34	0.10	0.06
38	0.36	0.16	0.73	0.06
39	0.56	0.31	-0.13	0.06
40	0.53	0.27	-0.03	0.06
41	0.41	0.34	0.54	0.06
42	0.50	0.32	0.13	0.06
43	0.29	0.26	1.09	0.07
44	0.52	0.45	0.04	0.06
45	0.27	0.22	1.20	0.07
46	0.53	0.32	0.01	0.06
47	0.50	0.32	0.13	0.06
48	0.28	0.19	1.18	0.07
49	0.40	0.32	0.58	0.06
50	0.25	0.22	1.33	0.07
Mean	0.53	0.30	-0.02	0.06

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.82	0.41	-0.75	0.06
2	0.83	0.44	-0.82	0.06
3	0.81	0.43	-0.61	0.06
4	0.76	0.53	-0.28	0.05
5	0.86	0.46	-1.03	0.06
6	0.72	0.43	-0.04	0.05
7	0.58	0.29	0.68	0.05
8	0.88	0.42	-1.30	0.07
9	0.77	0.46	-0.38	0.05
10	0.75	0.48	-0.23	0.05
11	0.84	0.25	-0.88	0.06
12	0.81	0.43	-0.64	0.06
13	0.64	0.28	0.39	0.05
14	0.49	0.41	1.14	0.05
15	0.67	0.41	0.23	0.05
16	0.74	0.44	-0.19	0.05
17	0.70	0.29	0.10	0.05
18	0.69	0.44	0.13	0.05
19	0.69	0.39	0.13	0.05
20	0.75	0.33	-0.26	0.05
21	0.76	0.48	-0.33	0.05
22	0.78	0.54	-0.44	0.05
23	0.59	0.53	0.66	0.05
24	0.78	0.42	-0.41	0.05
25	0.68	0.46	0.17	0.05
26	0.73	0.46	-0.10	0.05
27	0.76	0.44	-0.31	0.05
28	0.68	0.49	0.16	0.05
29	0.51	0.31	1.04	0.05
30	0.82	0.39	-0.71	0.06
31	0.77	0.55	-0.36	0.05
32	0.69	0.46	0.14	0.05
33	0.76	0.43	-0.27	0.05
34	0.54	0.41	0.90	0.05
35	0.62	0.40	0.50	0.05
36	0.64	0.37	0.39	0.05
37	0.75	0.54	-0.25	0.05
38	0.71	0.45	0.02	0.05
39	0.65	0.39	0.36	0.05
40	0.67	0.41	0.23	0.05
41	0.48	0.33	1.18	0.05
42	0.61	0.43	0.57	0.05
43	0.45	0.29	1.37	0.05
44	0.62	0.49	0.52	0.05
45	0.74	0.49	-0.15	0.05
Mean	0.70	0.42	0.01	0.05

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.83	0.36	-0.73	0.09
2	0.88	0.43	-1.17	0.10
3	0.79	0.42	-0.47	0.08
4	0.77	0.52	-0.34	0.08
5	0.85	0.42	-0.91	0.09
6	0.74	0.42	-0.12	0.08
7	0.79	0.37	-0.46	0.08
8	0.56	0.32	0.88	0.07
9	0.89	0.49	-1.35	0.11
10	0.89	0.49	-1.38	0.11
11	0.67	0.49	0.30	0.07
12	0.68	0.45	0.23	0.08
13	0.86	0.51	-1.00	0.10
14	0.81	0.56	-0.59	0.09
15	0.74	0.57	-0.15	0.08
16	0.79	0.55	-0.46	0.08
17	0.70	0.48	0.14	0.08
18	0.33	0.27	2.11	0.08
19	0.78	0.47	-0.41	0.08
20	0.75	0.41	-0.19	0.08
21	0.52	0.44	1.06	0.07
22	0.67	0.53	0.31	0.07
23	0.48	0.39	1.28	0.07
24	0.62	0.47	0.55	0.07
25	0.82	0.51	-0.65	0.09
26	0.68	0.46	0.22	0.08
27	0.73	0.47	-0.08	0.08
28	0.72	0.53	0.01	0.08
29	0.55	0.36	0.95	0.07
30	0.85	0.39	-0.97	0.10
31	0.75	0.55	-0.21	0.08
32	0.70	0.42	0.12	0.08
33	0.65	0.46	0.41	0.07
34	0.54	0.42	0.97	0.07
35	0.77	0.36	-0.31	0.08
36	0.55	0.45	0.96	0.07
37	0.72	0.30	-0.01	0.08
38	0.77	0.46	-0.30	0.08
39	0.57	0.47	0.82	0.07
40	0.70	0.47	0.12	0.08
41	0.63	0.42	0.53	0.07
42	0.57	0.39	0.85	0.07
43	0.58	0.44	0.80	0.07
44	0.57	0.37	0.85	0.07
45	0.62	0.32	0.56	0.07
Mean	0.70	0.44	0.06	0.08

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.91	0.31	-1.30	0.08
2	0.66	0.36	0.67	0.05
3	0.88	0.41	-0.93	0.07
4	0.82	0.42	-0.37	0.06
5	0.83	0.45	-0.47	0.06
6	0.64	0.40	0.76	0.05
7	0.47	0.37	1.58	0.05
8	0.65	0.30	0.70	0.05
9	0.68	0.38	0.52	0.05
10	0.90	0.33	-1.13	0.07
11	0.76	0.39	0.07	0.05
12	0.30	0.13	2.51	0.05
13	0.81	0.25	-0.27	0.06
14	0.64	0.57	0.73	0.05
15	0.74	0.42	0.19	0.05
16	0.73	0.51	0.22	0.05
17	0.71	0.45	0.37	0.05
18	0.59	0.34	1.00	0.05
19	0.69	0.57	0.46	0.05
20	0.64	0.17	0.73	0.05
21	0.75	0.37	0.15	0.05
22	0.71	0.45	0.38	0.05
23	0.66	0.50	0.63	0.05
24	0.54	0.46	1.25	0.05
25	0.78	0.52	-0.04	0.05
26	0.81	0.32	-0.31	0.06
27	0.66	0.42	0.66	0.05
28	0.62	0.40	0.84	0.05
29	0.83	0.36	-0.44	0.06
30	0.89	0.45	-0.98	0.07
31	0.39	0.23	1.98	0.05
32	0.54	0.27	1.27	0.05
33	0.82	0.23	-0.38	0.06
34	0.56	0.36	1.14	0.05
35	0.83	0.49	-0.45	0.06
36	0.87	0.38	-0.78	0.06
37	0.80	0.45	-0.24	0.06
38	0.60	0.51	0.97	0.05
39	0.53	0.42	1.32	0.05
40	0.65	0.56	0.72	0.05
41	0.78	0.49	-0.07	0.05
42	0.56	0.57	1.17	0.05
43	0.87	0.41	-0.75	0.06
44	0.83	0.45	-0.43	0.06
45	0.66	0.51	0.65	0.05
46	0.57	0.30	1.13	0.05
47	0.76	0.53	0.09	0.05
48	0.69	0.51	0.48	0.05
49	0.85	0.40	-0.62	0.06
50	0.81	0.53	-0.30	0.06
Mean	0.71	0.41	0.30	0.05

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.93	0.21	-1.48	0.13
2	0.68	0.41	0.62	0.07
3	0.90	0.36	-1.03	0.11
4	0.80	0.44	-0.10	0.08
5	0.85	0.41	-0.49	0.09
6	0.69	0.41	0.59	0.07
7	0.51	0.38	1.48	0.07
8	0.70	0.39	0.50	0.07
9	0.77	0.36	0.13	0.08
10	0.88	0.36	-0.78	0.10
11	0.74	0.44	0.26	0.08
12	0.28	0.07	2.68	0.08
13	0.79	0.31	-0.02	0.08
14	0.56	0.32	1.24	0.07
15	0.77	0.42	0.10	0.08
16	0.74	0.36	0.26	0.08
17	0.72	0.47	0.39	0.08
18	0.52	0.36	1.46	0.07
19	0.68	0.55	0.61	0.07
20	0.72	0.20	0.39	0.08
21	0.72	0.37	0.41	0.08
22	0.77	0.45	0.11	0.08
23	0.70	0.47	0.50	0.08
24	0.58	0.52	1.17	0.07
25	0.76	0.52	0.14	0.08
26	0.78	0.30	0.01	0.08
27	0.82	0.45	-0.22	0.09
28	0.65	0.43	0.77	0.07
29	0.84	0.31	-0.40	0.09
30	0.89	0.48	-0.90	0.10
31	0.42	0.31	1.93	0.07
32	0.67	0.41	0.68	0.07
33	0.80	0.18	-0.10	0.08
34	0.86	0.39	-0.62	0.10
35	0.69	0.37	0.55	0.07
36	0.56	0.27	1.26	0.07
37	0.83	0.48	-0.31	0.09
38	0.58	0.48	1.17	0.07
39	0.63	0.42	0.87	0.07
40	0.73	0.40	0.32	0.08
41	0.79	0.38	-0.02	0.08
42	0.43	0.44	1.89	0.07
43	0.86	0.38	-0.56	0.09
44	0.88	0.42	-0.76	0.10
45	0.67	0.50	0.68	0.07
46	0.66	0.40	0.76	0.07
47	0.77	0.55	0.11	0.08
48	0.77	0.49	0.09	0.08
49	0.80	0.35	-0.14	0.08
50	0.88	0.45	-0.81	0.10
Mean	0.72	0.39	0.31	0.08

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.81	0.37	-0.90	0.06
2	0.83	0.24	-1.06	0.06
3	0.74	0.39	-0.47	0.05
4	0.67	0.50	-0.10	0.05
5	0.76	0.50	-0.61	0.05
6	0.58	0.34	0.40	0.05
7	0.84	0.41	-1.16	0.06
8	0.67	0.30	-0.06	0.05
9	0.54	0.36	0.56	0.05
10	0.76	0.40	-0.58	0.05
11	0.58	0.49	0.36	0.05
12	0.82	0.47	-1.03	0.06
13	0.53	0.25	0.61	0.05
14	0.77	0.34	-0.65	0.05
15	0.75	0.42	-0.54	0.05
16	0.69	0.46	-0.17	0.05
17	0.63	0.53	0.15	0.05
18	0.74	0.50	-0.50	0.05
19	0.73	0.45	-0.43	0.05
20	0.71	0.36	-0.31	0.05
21	0.79	0.48	-0.81	0.05
22	0.64	0.40	0.07	0.05
23	0.54	0.35	0.59	0.05
24	0.65	0.46	0.01	0.05
25	0.55	0.47	0.55	0.05
26	0.54	0.44	0.58	0.05
27	0.72	0.42	-0.36	0.05
28	0.87	0.39	-1.47	0.07
29	0.56	0.39	0.50	0.05
30	0.81	0.36	-0.93	0.06
31	0.55	0.48	0.53	0.05
32	0.61	0.43	0.25	0.05
33	0.54	0.37	0.59	0.05
34	0.52	0.40	0.68	0.05
35	0.58	0.43	0.37	0.05
36	0.51	0.46	0.74	0.05
37	0.55	0.48	0.53	0.05
38	0.58	0.47	0.37	0.05
39	0.41	0.33	1.21	0.05
40	0.67	0.31	-0.06	0.05
Mean	0.66	0.41	-0.06	0.05

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.91	0.41	-2.01	0.12
2	0.91	0.32	-2.01	0.12
3	0.76	0.41	-0.62	0.08
4	0.75	0.48	-0.59	0.08
5	0.76	0.47	-0.62	0.08
6	0.53	0.34	0.57	0.07
7	0.83	0.47	-1.12	0.09
8	0.67	0.36	-0.14	0.07
9	0.84	0.50	-1.20	0.09
10	0.82	0.39	-1.11	0.09
11	0.60	0.51	0.25	0.07
12	0.81	0.45	-0.98	0.09
13	0.62	0.45	0.14	0.07
14	0.52	0.36	0.63	0.07
15	0.71	0.41	-0.37	0.08
16	0.67	0.49	-0.11	0.07
17	0.68	0.41	-0.18	0.07
18	0.66	0.48	-0.06	0.07
19	0.61	0.45	0.18	0.07
20	0.69	0.43	-0.22	0.07
21	0.45	0.41	0.98	0.07
22	0.55	0.46	0.49	0.07
23	0.79	0.49	-0.85	0.08
24	0.67	0.24	-0.15	0.07
25	0.58	0.50	0.34	0.07
26	0.57	0.45	0.38	0.07
27	0.58	0.23	0.34	0.07
28	0.70	0.36	-0.30	0.08
29	0.49	0.40	0.79	0.07
30	0.78	0.47	-0.81	0.08
31	0.33	0.33	1.60	0.07
32	0.74	0.51	-0.51	0.08
33	0.57	0.49	0.41	0.07
34	0.55	0.38	0.50	0.07
35	0.57	0.41	0.41	0.07
36	0.75	0.41	-0.59	0.08
37	0.59	0.47	0.31	0.07
38	0.51	0.45	0.69	0.07
39	0.52	0.53	0.66	0.07
40	0.76	0.43	-0.68	0.08
Mean	0.66	0.42	-0.14	0.08

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.91	0.29	-1.34	0.08
2	0.74	0.43	0.11	0.05
3	0.93	0.37	-1.57	0.08
4	0.85	0.43	-0.64	0.06
5	0.67	0.38	0.51	0.05
6	0.84	0.37	-0.56	0.06
7	0.78	0.45	-0.16	0.05
8	0.40	0.37	1.86	0.05
9	0.76	0.52	-0.03	0.05
10	0.50	0.43	1.36	0.05
11	0.86	0.25	-0.76	0.06
12	0.68	0.36	0.43	0.05
13	0.72	0.44	0.20	0.05
14	0.79	0.36	-0.23	0.06
15	0.55	0.32	1.13	0.05
16	0.92	0.27	-1.43	0.08
17	0.92	0.39	-1.39	0.08
18	0.48	0.39	1.43	0.05
19	0.89	0.40	-1.10	0.07
20	0.63	0.44	0.74	0.05
21	0.89	0.31	-1.09	0.07
22	0.66	0.31	0.54	0.05
23	0.58	0.26	0.99	0.05
24	0.81	0.43	-0.33	0.06
25	0.80	0.45	-0.31	0.06
26	0.63	0.49	0.72	0.05
27	0.85	0.50	-0.68	0.06
28	0.53	0.29	1.22	0.05
29	0.81	0.51	-0.38	0.06
30	0.74	0.44	0.09	0.05
31	0.41	0.32	1.78	0.05
32	0.73	0.57	0.19	0.05
33	0.57	0.41	1.03	0.05
34	0.53	0.41	1.23	0.05
35	0.65	0.45	0.61	0.05
36	0.92	0.39	-1.49	0.08
37	0.65	0.33	0.61	0.05
38	0.82	0.43	-0.44	0.06
39	0.81	0.49	-0.38	0.06
40	0.67	0.38	0.48	0.05
Mean	0.72	0.39	0.07	0.06

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.91	0.27	-1.26	0.12
2	0.93	0.21	-1.53	0.13
3	0.87	0.42	-0.83	0.10
4	0.85	0.41	-0.58	0.09
5	0.67	0.44	0.59	0.07
6	0.63	0.29	0.83	0.07
7	0.78	0.42	-0.07	0.08
8	0.61	0.48	0.92	0.07
9	0.68	0.53	0.56	0.07
10	0.50	0.44	1.45	0.07
11	0.86	0.29	-0.73	0.10
12	0.59	0.44	1.02	0.07
13	0.71	0.43	0.36	0.08
14	0.82	0.43	-0.37	0.09
15	0.55	0.36	1.24	0.07
16	0.90	0.42	-1.16	0.11
17	0.92	0.40	-1.40	0.12
18	0.63	0.44	0.79	0.07
19	0.92	0.37	-1.35	0.12
20	0.69	0.44	0.50	0.07
21	0.90	0.21	-1.07	0.11
22	0.66	0.42	0.64	0.07
23	0.58	0.30	1.07	0.07
24	0.79	0.47	-0.10	0.08
25	0.93	0.35	-1.58	0.13
26	0.45	0.21	1.71	0.07
27	0.87	0.52	-0.79	0.10
28	0.56	0.36	1.16	0.07
29	0.87	0.42	-0.76	0.10
30	0.76	0.42	0.07	0.08
31	0.69	0.41	0.51	0.07
32	0.81	0.48	-0.24	0.09
33	0.68	0.41	0.52	0.07
34	0.95	0.30	-1.85	0.14
35	0.69	0.43	0.50	0.07
36	0.50	0.46	1.45	0.07
37	0.78	0.52	-0.07	0.08
38	0.79	0.47	-0.15	0.08
39	0.78	0.44	-0.05	0.08
40	0.68	0.35	0.58	0.07
Mean	0.74	0.40	0.01	0.09

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.67	0.29	0.35	0.05
2	0.93	0.24	-1.79	0.08
3	0.76	0.40	-0.19	0.05
4	0.71	0.46	0.14	0.05
5	0.85	0.39	-0.91	0.06
6	0.78	0.31	-0.34	0.05
7	0.73	0.44	0.01	0.05
8	0.82	0.34	-0.63	0.06
9	0.56	0.25	0.96	0.05
10	0.91	0.43	-1.49	0.07
11	0.52	0.34	1.17	0.04
12	0.83	0.40	-0.68	0.06
13	0.87	0.52	-1.09	0.06
14	0.91	0.46	-1.49	0.07
15	0.90	0.46	-1.45	0.07
16	0.71	0.46	0.12	0.05
17	0.80	0.53	-0.49	0.05
18	0.62	0.37	0.63	0.05
19	0.89	0.42	-1.32	0.07
20	0.49	0.45	1.31	0.04
21	0.74	0.59	-0.05	0.05
22	0.86	0.53	-0.94	0.06
23	0.64	0.49	0.54	0.05
24	0.84	0.50	-0.77	0.06
25	0.57	0.44	0.89	0.05
26	0.70	0.47	0.17	0.05
27	0.70	0.51	0.19	0.05
28	0.51	0.42	1.22	0.04
29	0.59	0.27	0.83	0.05
30	0.48	0.35	1.36	0.04
31	0.63	0.56	0.59	0.05
32	0.69	0.45	0.23	0.05
33	0.75	0.50	-0.13	0.05
34	0.52	0.50	1.16	0.04
35	0.81	0.60	-0.53	0.05
36	0.64	0.43	0.53	0.05
37	0.78	0.54	-0.32	0.05
38	0.74	0.56	-0.03	0.05
39	0.77	0.53	-0.26	0.05
40	0.64	0.44	0.54	0.05
41	0.76	0.56	-0.21	0.05
42	0.81	0.58	-0.58	0.06
Mean	0.72	0.45	-0.06	0.05

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.71	0.33	0.01	0.10
2	0.63	0.28	0.45	0.09
3	0.50	0.19	1.11	0.09
4	0.75	0.39	-0.22	0.10
5	0.68	0.35	0.23	0.10
6	0.84	0.25	-0.91	0.12
7	0.70	0.40	0.10	0.10
8	0.78	0.38	-0.40	0.11
9	0.59	0.27	0.69	0.09
10	0.90	0.37	-1.53	0.15
11	0.50	0.32	1.10	0.09
12	0.83	0.40	-0.78	0.12
13	0.84	0.53	-0.87	0.12
14	0.88	0.58	-1.22	0.13
15	0.73	0.42	-0.10	0.10
16	0.74	0.32	-0.17	0.10
17	0.80	0.53	-0.55	0.11
18	0.63	0.25	0.47	0.09
19	0.93	0.42	-1.83	0.16
20	0.73	0.47	-0.09	0.10
21	0.76	0.43	-0.30	0.11
22	0.58	0.44	0.74	0.09
23	0.63	0.28	0.50	0.09
24	0.36	0.29	1.83	0.09
25	0.74	0.37	-0.12	0.10
26	0.66	0.46	0.32	0.10
27	0.61	0.45	0.57	0.09
28	0.75	0.62	-0.20	0.10
29	0.79	0.51	-0.49	0.11
30	0.76	0.31	-0.26	0.10
31	0.55	0.47	0.89	0.09
32	0.70	0.51	0.06	0.10
33	0.80	0.62	-0.53	0.11
34	0.75	0.66	-0.22	0.10
35	0.76	0.46	-0.30	0.11
36	0.67	0.44	0.27	0.10
37	0.75	0.60	-0.23	0.10
38	0.73	0.54	-0.08	0.10
39	0.75	0.47	-0.18	0.10
40	0.63	0.41	0.47	0.09
41	0.76	0.58	-0.26	0.10
42	0.81	0.58	-0.67	0.11
Mean	0.71	0.43	-0.06	0.10

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.67	0.44	-0.13	0.05
2	0.63	0.48	0.08	0.04
3	0.75	0.47	-0.56	0.05
4	0.75	0.41	-0.57	0.05
5	0.71	0.54	-0.33	0.05
6	0.78	0.55	-0.75	0.05
7	0.59	0.36	0.30	0.04
8	0.67	0.49	-0.11	0.05
9	0.69	0.46	-0.25	0.05
10	0.70	0.46	-0.27	0.05
11	0.67	0.54	-0.09	0.05
12	0.46	0.52	0.91	0.04
13	0.58	0.43	0.35	0.04
14	0.47	0.37	0.89	0.04
15	0.71	0.42	-0.32	0.05
16	0.84	0.38	-1.17	0.06
17	0.36	0.49	1.41	0.05
18	0.59	0.47	0.32	0.04
19	0.59	0.54	0.31	0.04
20	0.61	0.51	0.20	0.04
21	0.66	0.39	-0.05	0.05
22	0.87	0.36	-1.50	0.06
23	0.52	0.27	0.65	0.04
24	0.43	0.23	1.08	0.04
25	0.73	0.42	-0.45	0.05
26	0.59	0.31	0.30	0.04
27	0.79	0.39	-0.84	0.05
28	0.71	0.34	-0.31	0.05
29	0.48	0.31	0.82	0.04
30	0.73	0.44	-0.43	0.05
31	0.65	0.42	-0.03	0.05
32	0.32	0.23	1.65	0.05
33	0.75	0.44	-0.59	0.05
34	0.50	0.38	0.72	0.04
35	0.86	0.40	-1.40	0.06
36	0.84	0.41	-1.18	0.06
37	0.52	0.52	0.66	0.04
38	0.53	0.38	0.58	0.04
39	0.66	0.35	-0.08	0.05
40	0.47	0.32	0.89	0.04
41	0.69	0.38	-0.21	0.05
42	0.55	0.47	0.48	0.04
43	0.72	0.46	-0.38	0.05
44	0.40	0.31	1.25	0.04
45	0.50	0.32	0.74	0.04
46	0.47	0.38	0.86	0.04
47	0.77	0.36	-0.70	0.05
48	0.55	0.30	0.47	0.04
49	0.33	0.47	1.60	0.05
50	0.42	0.46	1.13	0.04
Mean	0.62	0.41	0.12	0.05

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.71	0.26	-0.43	0.10
2	0.65	0.39	-0.12	0.09
3	0.72	0.49	-0.50	0.10
4	0.71	0.36	-0.42	0.09
5	0.70	0.51	-0.40	0.09
6	0.87	0.45	-1.53	0.13
7	0.42	0.44	0.93	0.09
8	0.63	0.42	-0.02	0.09
9	0.61	0.43	0.06	0.09
10	0.69	0.45	-0.31	0.09
11	0.58	0.48	0.23	0.09
12	0.32	0.42	1.43	0.09
13	0.60	0.29	0.14	0.09
14	0.34	0.44	1.35	0.09
15	0.59	0.35	0.18	0.09
16	0.80	0.40	-0.99	0.11
17	0.30	0.46	1.56	0.10
18	0.55	0.36	0.35	0.09
19	0.51	0.26	0.54	0.09
20	0.56	0.41	0.31	0.09
21	0.63	0.37	-0.04	0.09
22	0.87	0.31	-1.50	0.12
23	0.66	0.32	-0.15	0.09
24	0.18	0.14	2.30	0.11
25	0.76	0.40	-0.71	0.10
26	0.59	0.29	0.18	0.09
27	0.75	0.35	-0.69	0.10
28	0.73	0.29	-0.53	0.10
29	0.43	0.07	0.92	0.09
30	0.81	0.28	-1.08	0.11
31	0.68	0.37	-0.30	0.09
32	0.32	0.16	1.43	0.09
33	0.74	0.47	-0.58	0.10
34	0.44	0.33	0.84	0.09
35	0.85	0.44	-1.35	0.12
36	0.81	0.42	-1.08	0.11
37	0.52	0.49	0.50	0.09
38	0.49	0.32	0.63	0.09
39	0.81	0.19	-1.02	0.11
40	0.47	0.24	0.70	0.09
41	0.66	0.25	-0.19	0.09
42	0.39	0.28	1.11	0.09
43	0.44	0.37	0.87	0.09
44	0.29	0.29	1.60	0.10
45	0.45	0.27	0.80	0.09
46	0.42	0.37	0.94	0.09
47	0.76	0.41	-0.75	0.10
48	0.70	0.35	-0.40	0.09
49	0.39	0.33	1.09	0.09
50	0.33	0.28	1.37	0.09
Mean	0.58	0.35	0.15	0.09

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.50	0.25	0.42	0.04
2	0.72	0.31	-0.67	0.05
3	0.67	0.37	-0.41	0.05
4	0.64	0.54	-0.25	0.04
5	0.48	0.37	0.53	0.04
6	0.56	0.43	0.11	0.04
7	0.64	0.45	-0.25	0.04
8	0.45	0.24	0.64	0.04
9	0.72	0.53	-0.70	0.05
10	0.62	0.46	-0.15	0.04
11	0.74	0.49	-0.83	0.05
12	0.57	0.40	0.06	0.04
13	0.54	0.42	0.22	0.04
14	0.57	0.37	0.07	0.04
15	0.77	0.42	-0.96	0.05
16	0.58	0.47	0.02	0.04
17	0.68	0.35	-0.46	0.05
18	0.59	0.38	-0.04	0.04
19	0.33	0.26	1.27	0.05
20	0.86	0.39	-1.64	0.06
21	0.50	0.40	0.41	0.04
22	0.46	0.38	0.60	0.04
23	0.61	0.42	-0.10	0.04
24	0.78	0.45	-1.02	0.05
25	0.45	0.10	0.65	0.04
26	0.90	0.32	-2.05	0.07
27	0.58	0.41	0.02	0.04
28	0.70	0.52	-0.57	0.05
29	0.55	0.39	0.16	0.04
30	0.34	0.30	1.20	0.05
31	0.65	0.45	-0.33	0.05
32	0.73	0.45	-0.72	0.05
33	0.56	0.50	0.13	0.04
34	0.51	0.40	0.38	0.04
35	0.65	0.47	-0.30	0.04
36	0.45	0.40	0.65	0.04
37	0.65	0.46	-0.31	0.04
38	0.46	0.28	0.62	0.04
39	0.81	0.43	-1.29	0.05
40	0.54	0.50	0.20	0.04
Mean	0.60	0.40	-0.12	0.05

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.52	0.33	0.22	0.09
2	0.27	0.20	1.48	0.10
3	0.61	0.42	-0.18	0.09
4	0.63	0.52	-0.32	0.09
5	0.56	0.51	0.01	0.09
6	0.41	0.27	0.71	0.09
7	0.47	0.31	0.46	0.09
8	0.51	0.42	0.27	0.09
9	0.70	0.49	-0.65	0.10
10	0.61	0.42	-0.20	0.09
11	0.73	0.30	-0.85	0.10
12	0.55	0.39	0.06	0.09
13	0.78	0.45	-1.12	0.10
14	0.49	0.36	0.37	0.09
15	0.66	0.46	-0.44	0.09
16	0.68	0.24	-0.55	0.09
17	0.57	0.33	-0.02	0.09
18	0.81	0.42	-1.33	0.11
19	0.72	0.47	-0.77	0.10
20	0.50	0.35	0.32	0.09
21	0.54	0.42	0.11	0.09
22	0.42	0.35	0.68	0.09
23	0.58	0.36	-0.07	0.09
24	0.80	0.37	-1.25	0.11
25	0.44	0.26	0.61	0.09
26	0.69	0.52	-0.58	0.09
27	0.56	0.38	0.03	0.09
28	0.54	0.43	0.13	0.09
29	0.54	0.40	0.10	0.09
30	0.32	0.30	1.19	0.09
31	0.70	0.37	-0.68	0.10
32	0.69	0.51	-0.59	0.09
33	0.86	0.32	-1.69	0.12
34	0.62	0.38	-0.26	0.09
35	0.64	0.21	-0.37	0.09
36	0.57	0.34	0.00	0.09
37	0.60	0.36	-0.15	0.09
38	0.41	0.28	0.71	0.09
39	0.83	0.40	-1.44	0.11
40	0.56	0.36	0.02	0.09
Mean	0.59	0.37	-0.15	0.09

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.80	0.22	-0.52	0.05
2	0.92	0.29	-1.68	0.07
3	0.77	0.41	-0.33	0.05
4	0.76	0.30	-0.28	0.05
5	0.80	0.39	-0.53	0.05
6	0.72	0.32	-0.04	0.05
7	0.54	0.35	0.87	0.04
8	0.89	0.43	-1.31	0.07
9	0.69	0.43	0.10	0.05
10	0.56	0.40	0.78	0.04
11	0.52	0.24	0.96	0.04
12	0.70	0.42	0.05	0.05
13	0.75	0.33	-0.23	0.05
14	0.71	0.48	0.03	0.05
15	0.80	0.33	-0.52	0.05
16	0.90	0.38	-1.46	0.07
17	0.83	0.37	-0.80	0.06
18	0.74	0.42	-0.17	0.05
19	0.71	0.29	-0.02	0.05
20	0.47	0.35	1.20	0.04
21	0.82	0.46	-0.66	0.05
22	0.75	0.39	-0.23	0.05
23	0.66	0.45	0.29	0.04
24	0.66	0.39	0.26	0.05
25	0.52	0.42	0.96	0.04
26	0.68	0.47	0.16	0.05
27	0.92	0.31	-1.62	0.07
28	0.68	0.44	0.15	0.05
29	0.56	0.40	0.74	0.04
30	0.66	0.25	0.27	0.04
31	0.80	0.26	-0.56	0.05
32	0.75	0.34	-0.22	0.05
33	0.40	0.33	1.49	0.04
34	0.76	0.46	-0.28	0.05
35	0.60	0.29	0.59	0.04
36	0.72	0.36	-0.02	0.05
37	0.72	0.25	-0.03	0.05
38	0.71	0.45	0.02	0.05
39	0.70	0.35	0.08	0.05
40	0.65	0.45	0.33	0.04
Mean	0.71	0.37	-0.05	0.05

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.73	0.42	-0.22	0.10
2	0.94	0.17	-2.06	0.17
3	0.76	0.40	-0.36	0.10
4	0.64	0.29	0.26	0.09
5	0.66	0.36	0.18	0.09
6	0.71	0.48	-0.10	0.10
7	0.86	0.24	-1.12	0.12
8	0.87	0.38	-1.23	0.13
9	0.72	0.26	-0.17	0.10
10	0.51	0.46	0.86	0.09
11	0.66	0.30	0.16	0.09
12	0.58	0.17	0.52	0.09
13	0.68	0.21	0.06	0.09
14	0.67	0.45	0.12	0.09
15	0.80	0.26	-0.66	0.11
16	0.90	0.36	-1.48	0.14
17	0.73	0.36	-0.22	0.10
18	0.92	0.37	-1.71	0.15
19	0.62	0.31	0.34	0.09
20	0.79	0.22	-0.57	0.10
21	0.52	0.32	0.83	0.09
22	0.41	0.34	1.31	0.09
23	0.68	0.48	0.05	0.09
24	0.62	0.33	0.35	0.09
25	0.42	0.29	1.27	0.09
26	0.84	0.49	-0.93	0.12
27	0.67	0.35	0.11	0.09
28	0.39	0.27	1.40	0.09
29	0.71	0.39	-0.09	0.10
30	0.63	0.31	0.29	0.09
31	0.83	0.21	-0.83	0.11
32	0.78	0.34	-0.49	0.10
33	0.53	0.33	0.78	0.09
34	0.69	0.47	0.03	0.09
35	0.44	0.24	1.18	0.09
36	0.47	0.32	1.05	0.09
37	0.80	0.42	-0.62	0.11
38	0.72	0.44	-0.15	0.10
39	0.83	0.40	-0.83	0.11
40	0.58	0.23	0.55	0.09
Mean	0.68	0.34	-0.05	0.10

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.93	0.38	-1.73	0.08
2	0.90	0.37	-1.40	0.07
3	0.68	0.31	0.25	0.05
4	0.87	0.39	-1.08	0.06
5	0.78	0.38	-0.34	0.05
6	0.70	0.49	0.16	0.05
7	0.87	0.42	-1.06	0.06
8	0.75	0.48	-0.18	0.05
9	0.67	0.42	0.31	0.05
10	0.73	0.49	0.00	0.05
11	0.64	0.45	0.48	0.05
12	0.82	0.42	-0.60	0.05
13	0.78	0.42	-0.33	0.05
14	0.57	0.49	0.82	0.04
15	0.69	0.38	0.21	0.05
16	0.65	0.42	0.40	0.05
17	0.62	0.51	0.58	0.05
18	0.59	0.39	0.72	0.04
19	0.80	0.31	-0.51	0.05
20	0.45	0.34	1.44	0.04
21	0.50	0.48	1.17	0.04
22	0.51	0.43	1.13	0.04
23	0.81	0.37	-0.53	0.05
24	0.65	0.52	0.42	0.05
25	0.62	0.44	0.57	0.05
26	0.74	0.50	-0.07	0.05
27	0.69	0.35	0.22	0.05
28	0.84	0.47	-0.80	0.06
29	0.61	0.41	0.60	0.05
30	0.51	0.31	1.14	0.04
Mean	0.70	0.42	0.07	0.05

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.91	0.45	-1.47	0.15
2	0.90	0.39	-1.35	0.14
3	0.75	0.29	-0.16	0.10
4	0.82	0.38	-0.61	0.11
5	0.75	0.32	-0.12	0.10
6	0.59	0.24	0.73	0.09
7	0.82	0.48	-0.64	0.11
8	0.69	0.31	0.23	0.10
9	0.66	0.41	0.37	0.09
10	0.59	0.47	0.72	0.09
11	0.86	0.39	-0.94	0.12
12	0.68	0.43	0.26	0.10
13	0.79	0.34	-0.36	0.11
14	0.57	0.43	0.80	0.09
15	0.69	0.39	0.18	0.10
16	0.62	0.38	0.56	0.09
17	0.61	0.47	0.60	0.09
18	0.53	0.39	1.01	0.09
19	0.48	0.26	1.24	0.09
20	0.83	0.46	-0.66	0.11
21	0.84	0.50	-0.79	0.12
22	0.53	0.40	0.98	0.09
23	0.74	0.39	-0.07	0.10
24	0.57	0.48	0.79	0.09
25	0.61	0.35	0.61	0.09
26	0.74	0.51	-0.09	0.10
27	0.38	0.35	1.72	0.09
28	0.82	0.43	-0.61	0.11
29	0.54	0.35	0.93	0.09
30	0.57	0.36	0.81	0.09
Mean	0.68	0.39	0.16	0.10

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.79	0.28	-0.69	0.05
2	0.81	0.29	-0.90	0.05
3	0.70	0.47	-0.13	0.05
4	0.78	0.37	-0.65	0.05
5	0.67	0.41	0.02	0.04
6	0.46	0.21	1.10	0.04
7	0.70	0.43	-0.15	0.05
8	0.36	0.18	1.61	0.04
9	0.74	0.43	-0.38	0.05
10	0.85	0.46	-1.18	0.06
11	0.92	0.44	-1.98	0.07
12	0.64	0.36	0.17	0.04
13	0.30	0.18	1.94	0.05
14	0.72	0.42	-0.26	0.05
15	0.49	0.52	0.94	0.04
16	0.57	0.36	0.53	0.04
17	0.78	0.48	-0.64	0.05
18	0.77	0.29	-0.55	0.05
19	0.66	0.37	0.09	0.04
20	0.69	0.41	-0.06	0.05
21	0.59	0.49	0.44	0.04
22	0.62	0.32	0.30	0.04
23	0.71	0.52	-0.21	0.05
24	0.68	0.57	-0.04	0.05
25	0.40	0.36	1.41	0.04
26	0.74	0.53	-0.41	0.05
27	0.78	0.52	-0.61	0.05
28	0.58	0.37	0.51	0.04
29	0.76	0.53	-0.50	0.05
30	0.73	0.51	-0.35	0.05
31	0.63	0.44	0.22	0.04
32	0.73	0.52	-0.32	0.05
33	0.76	0.52	-0.49	0.05
34	0.68	0.46	-0.05	0.05
35	0.53	0.43	0.75	0.04
36	0.68	0.55	-0.04	0.05
37	0.74	0.63	-0.41	0.05
38	0.64	0.47	0.18	0.04
39	0.70	0.53	-0.13	0.05
40	0.74	0.64	-0.41	0.05
41	0.63	0.49	0.26	0.04
42	0.75	0.51	-0.44	0.05
Mean	0.67	0.44	-0.04	0.05

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.80	0.42	-1.03	0.11
2	0.77	0.42	-0.82	0.10
3	0.83	0.50	-1.24	0.11
4	0.42	0.22	1.13	0.09
5	0.81	0.36	-1.13	0.11
6	0.67	0.56	-0.16	0.09
7	0.87	0.25	-1.63	0.13
8	0.37	0.19	1.38	0.09
9	0.68	0.48	-0.26	0.10
10	0.80	0.52	-1.04	0.11
11	0.88	0.54	-1.69	0.13
12	0.62	0.38	0.09	0.09
13	0.30	0.14	1.81	0.10
14	0.84	0.51	-1.33	0.12
15	0.63	0.59	0.02	0.09
16	0.61	0.44	0.17	0.09
17	0.67	0.53	-0.21	0.09
18	0.78	0.47	-0.84	0.10
19	0.77	0.47	-0.83	0.10
20	0.71	0.47	-0.42	0.10
21	0.54	0.51	0.50	0.09
22	0.49	0.37	0.77	0.09
23	0.68	0.38	-0.21	0.09
24	0.66	0.54	-0.12	0.09
25	0.76	0.54	-0.76	0.10
26	0.78	0.35	-0.88	0.11
27	0.70	0.48	-0.38	0.10
28	0.55	0.38	0.48	0.09
29	0.77	0.58	-0.81	0.10
30	0.71	0.58	-0.43	0.10
31	0.57	0.46	0.34	0.09
32	0.72	0.55	-0.47	0.10
33	0.74	0.55	-0.58	0.10
34	0.63	0.48	0.04	0.09
35	0.53	0.45	0.58	0.09
36	0.62	0.52	0.08	0.09
37	0.61	0.47	0.16	0.09
38	0.47	0.47	0.87	0.09
39	0.68	0.60	-0.24	0.10
40	0.63	0.55	0.07	0.09
41	0.75	0.59	-0.69	0.10
42	0.58	0.49	0.29	0.09
Mean	0.67	0.46	-0.22	0.10

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.84	0.31	-0.18	0.15
2	0.76	0.32	0.45	0.13
3	0.72	0.34	0.69	0.12
4	0.79	0.25	0.28	0.13
5	0.91	0.40	-0.84	0.18
6	0.68	0.28	0.93	0.12
7	0.74	0.31	0.55	0.12
8	0.87	0.46	-0.45	0.16
9	0.74	0.55	0.56	0.12
10	0.82	0.57	-0.01	0.14
11	0.72	0.30	0.71	0.12
12	0.92	0.51	-1.04	0.19
13	0.65	0.43	1.09	0.12
14	0.84	0.26	-0.15	0.15
15	0.88	0.47	-0.58	0.17
16	0.86	0.39	-0.33	0.15
17	0.94	0.52	-1.32	0.21
18	0.70	0.38	0.83	0.12
19	0.82	0.44	0.04	0.14
20	0.82	0.43	0.03	0.14
21	0.87	0.57	-0.42	0.16
22	0.75	0.38	0.52	0.13
23	0.72	0.31	0.71	0.12
24	0.77	0.40	0.37	0.13
25	0.91	0.49	-0.84	0.18
26	0.64	0.30	1.16	0.11
27	0.95	0.47	-1.62	0.24
28	0.91	0.45	-0.87	0.18
29	0.90	0.49	-0.72	0.17
30	0.58	0.24	1.43	0.11
31	0.53	0.28	1.71	0.11
32	0.71	0.46	0.75	0.12
33	0.81	0.45	0.08	0.14
34	0.88	0.54	-0.52	0.16
35	0.80	0.52	0.15	0.14
36	0.86	0.56	-0.28	0.15
37	0.73	0.40	0.65	0.12
38	0.70	0.47	0.83	0.12
39	0.70	0.36	0.81	0.12
40	0.81	0.54	0.10	0.14
41	0.93	0.46	-1.15	0.20
42	0.64	0.30	1.15	0.11
Mean	0.79	0.41	0.13	0.14

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.67	0.45	-0.42	0.05
2	0.40	0.35	0.90	0.04
3	0.67	0.35	-0.41	0.05
4	0.42	0.33	0.80	0.04
5	0.59	0.42	-0.02	0.04
6	0.81	0.43	-1.23	0.05
7	0.61	0.41	-0.12	0.04
8	0.82	0.47	-1.36	0.05
9	0.71	0.41	-0.65	0.05
10	0.62	0.39	-0.15	0.04
11	0.57	0.50	0.09	0.04
12	0.72	0.44	-0.72	0.05
13	0.72	0.38	-0.68	0.05
14	0.70	0.55	-0.59	0.05
15	0.54	0.51	0.22	0.04
16	0.66	0.43	-0.39	0.04
17	0.48	0.35	0.54	0.04
18	0.36	0.32	1.10	0.04
19	0.33	0.34	1.24	0.05
20	0.87	0.29	-1.76	0.06
21	0.59	0.33	-0.03	0.04
22	0.58	0.36	0.03	0.04
23	0.46	0.16	0.61	0.04
24	0.51	0.28	0.38	0.04
25	0.45	0.25	0.66	0.04
26	0.69	0.37	-0.52	0.05
27	0.59	0.34	-0.01	0.04
28	0.73	0.31	-0.76	0.05
29	0.45	0.45	0.64	0.04
30	0.83	0.34	-1.43	0.05
31	0.59	0.35	0.00	0.04
32	0.82	0.47	-1.38	0.05
33	0.57	0.56	0.08	0.04
34	0.72	0.41	-0.70	0.05
35	0.74	0.43	-0.81	0.05
36	0.61	0.27	-0.13	0.04
37	0.57	0.32	0.08	0.04
38	0.73	0.38	-0.76	0.05
39	0.42	0.47	0.79	0.04
40	0.48	0.43	0.50	0.04
41	0.43	0.47	0.76	0.04
42	0.48	0.39	0.53	0.04
43	0.67	0.49	-0.42	0.05
44	0.55	0.36	0.19	0.04
45	0.63	0.50	-0.23	0.04
46	0.66	0.53	-0.36	0.04
47	0.73	0.51	-0.78	0.05
48	0.65	0.48	-0.34	0.04
49	0.48	0.44	0.50	0.04
50	0.85	0.41	-1.55	0.06
51	0.73	0.47	-0.74	0.05
52	0.44	0.40	0.71	0.04
53	0.50	0.45	0.41	0.04
54	0.45	0.37	0.64	0.04
55	0.48	0.39	0.51	0.04
56	0.45	0.48	0.65	0.04
57	0.68	0.38	-0.48	0.05
58	0.36	0.40	1.10	0.04
59	0.34	0.26	1.24	0.05
60	0.52	0.42	0.34	0.04
Mean	0.59	0.40	-0.06	0.05

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.72	0.37	-0.92	0.10
2	0.44	0.39	0.48	0.09
3	0.65	0.37	-0.52	0.09
4	0.40	0.30	0.69	0.09
5	0.66	0.56	-0.59	0.09
6	0.65	0.52	-0.52	0.09
7	0.53	0.39	0.02	0.09
8	0.44	0.41	0.49	0.09
9	0.79	0.45	-1.37	0.11
10	0.55	0.28	-0.04	0.09
11	0.65	0.50	-0.54	0.09
12	0.59	0.53	-0.26	0.09
13	0.66	0.46	-0.58	0.09
14	0.63	0.54	-0.46	0.09
15	0.35	0.36	0.94	0.09
16	0.52	0.35	0.08	0.09
17	0.43	0.34	0.53	0.09
18	0.38	0.33	0.76	0.09
19	0.32	0.13	1.07	0.09
20	0.83	0.31	-1.68	0.11
21	0.74	0.34	-1.06	0.10
22	0.57	0.36	-0.17	0.09
23	0.42	0.11	0.59	0.09
24	0.33	0.14	1.04	0.09
25	0.37	0.28	0.81	0.09
26	0.59	0.22	-0.24	0.09
27	0.42	0.45	0.57	0.09
28	0.72	0.33	-0.92	0.10
29	0.44	0.34	0.45	0.09
30	0.82	0.38	-1.57	0.11
31	0.52	0.54	0.09	0.09
32	0.80	0.43	-1.45	0.11
33	0.62	0.43	-0.41	0.09
34	0.67	0.46	-0.66	0.09
35	0.68	0.41	-0.69	0.09
36	0.49	0.44	0.25	0.09
37	0.53	0.46	0.03	0.09
38	0.43	0.38	0.52	0.09
39	0.36	0.41	0.86	0.09
40	0.49	0.40	0.21	0.09
41	0.53	0.54	0.05	0.09
42	0.30	0.10	1.19	0.10
43	0.62	0.50	-0.39	0.09
44	0.50	0.37	0.18	0.09
45	0.60	0.49	-0.28	0.09
46	0.56	0.45	-0.10	0.09
47	0.52	0.57	0.10	0.09
48	0.64	0.58	-0.50	0.09
49	0.38	0.44	0.77	0.09
50	0.67	0.51	-0.66	0.09
51	0.65	0.47	-0.56	0.09
52	0.58	0.43	-0.21	0.09
53	0.48	0.52	0.31	0.09
54	0.41	0.49	0.61	0.09
55	0.46	0.57	0.38	0.09
56	0.41	0.40	0.60	0.09
57	0.65	0.52	-0.56	0.09
58	0.32	0.39	1.09	0.10
59	0.31	0.40	1.12	0.10
60	0.45	0.35	0.43	0.09
Mean	0.54	0.40	-0.01	0.09

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.86	0.34	-0.55	0.16
2	0.69	0.21	0.75	0.12
3	0.86	0.40	-0.57	0.16
4	0.65	0.47	0.97	0.12
5	0.89	0.53	-0.87	0.17
6	0.80	0.56	0.00	0.14
7	0.85	0.53	-0.43	0.15
8	0.58	0.43	1.38	0.12
9	0.77	0.60	0.18	0.13
10	0.94	0.37	-1.67	0.22
11	0.90	0.47	-1.05	0.18
12	0.90	0.53	-1.05	0.18
13	0.83	0.47	-0.24	0.15
14	0.98	0.12	-2.75	0.35
15	0.78	0.58	0.13	0.14
16	0.79	0.39	0.07	0.14
17	0.85	0.56	-0.41	0.15
18	0.90	0.42	-0.98	0.18
19	0.60	0.46	1.24	0.12
20	0.86	0.51	-0.57	0.16
21	0.45	0.04	2.07	0.11
22	0.72	0.21	0.54	0.13
23	0.75	0.42	0.33	0.13
24	0.91	0.20	-1.15	0.19
25	0.82	0.41	-0.16	0.14
26	0.82	0.49	-0.20	0.14
27	0.62	0.65	1.14	0.12
28	0.65	0.22	0.95	0.12
29	0.83	0.46	-0.26	0.15
30	0.66	0.30	0.90	0.12
31	0.85	0.51	-0.46	0.15
32	0.89	0.45	-0.92	0.17
33	0.85	0.57	-0.48	0.15
34	0.87	0.54	-0.65	0.16
35	0.68	0.51	0.80	0.12
36	0.63	0.40	1.09	0.12
37	0.82	0.56	-0.20	0.14
38	0.71	0.59	0.63	0.12
39	0.70	0.36	0.69	0.12
40	0.71	0.48	0.63	0.12
41	0.77	0.64	0.23	0.13
42	0.85	0.38	-0.48	0.15
43	0.87	0.51	-0.60	0.16
44	0.71	0.35	0.59	0.13
45	0.69	0.56	0.72	0.12
46	0.91	0.47	-1.15	0.19
47	0.72	0.53	0.54	0.13
48	0.84	0.55	-0.39	0.15
49	0.75	0.49	0.32	0.13
50	0.82	0.49	-0.18	0.14
51	0.77	0.56	0.20	0.13
52	0.83	0.52	-0.30	0.15
53	0.78	0.50	0.13	0.14
54	0.58	0.51	1.38	0.12
55	0.86	0.58	-0.50	0.16
56	0.87	0.47	-0.62	0.16
57	0.82	0.47	-0.20	0.14
58	0.41	0.47	2.26	0.12
59	0.66	0.58	0.92	0.12
60	0.76	0.40	0.27	0.13
Mean	0.77	0.45	0.03	0.15

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.79	0.40	-1.13	0.05
2	0.83	0.40	-1.37	0.05
3	0.96	0.29	-2.95	0.10
4	0.82	0.42	-1.34	0.05
5	0.67	0.48	-0.44	0.04
6	0.52	0.19	0.28	0.04
7	0.49	0.44	0.40	0.04
8	0.27	0.24	1.51	0.05
9	0.46	0.34	0.57	0.04
10	0.53	0.13	0.23	0.04
11	0.66	0.47	-0.39	0.04
12	0.68	0.44	-0.49	0.04
13	0.91	0.32	-2.18	0.07
14	0.27	0.41	1.47	0.05
15	0.49	0.49	0.40	0.04
16	0.64	0.35	-0.30	0.04
17	0.36	0.31	1.00	0.04
18	0.78	0.45	-1.08	0.05
19	0.41	0.34	0.79	0.04
20	0.59	0.37	-0.03	0.04
21	0.72	0.42	-0.72	0.05
22	0.38	0.34	0.92	0.04
23	0.55	0.46	0.13	0.04
24	0.83	0.33	-1.37	0.05
25	0.85	0.39	-1.53	0.06
26	0.39	0.47	0.87	0.04
27	0.49	0.40	0.39	0.04
28	0.34	0.22	1.10	0.04
29	0.28	0.14	1.43	0.05
30	0.51	0.43	0.32	0.04
31	0.40	0.15	0.84	0.04
32	0.75	0.33	-0.88	0.05
33	0.65	0.38	-0.32	0.04
34	0.31	0.38	1.27	0.04
35	0.71	0.41	-0.62	0.05
36	0.68	0.28	-0.50	0.04
37	0.78	0.39	-1.04	0.05
38	0.64	0.27	-0.30	0.04
39	0.43	0.25	0.66	0.04
40	0.51	0.46	0.33	0.04
41	0.33	0.19	1.15	0.04
42	0.59	0.29	-0.06	0.04
43	0.57	0.43	0.03	0.04
44	0.60	0.31	-0.07	0.04
45	0.53	0.35	0.23	0.04
46	0.43	0.30	0.71	0.04
47	0.57	0.52	0.03	0.04
48	0.40	0.26	0.85	0.04
49	0.50	0.20	0.36	0.04
50	0.38	0.37	0.92	0.04
Mean	0.56	0.35	0.00	0.05

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.74	0.48	-1.02	0.10
2	0.79	0.42	-1.32	0.11
3	0.71	0.40	-0.82	0.10
4	0.43	0.32	0.49	0.09
5	0.29	0.17	1.18	0.10
6	0.29	0.21	1.18	0.10
7	0.71	0.31	-0.87	0.10
8	0.32	0.32	1.02	0.10
9	0.41	0.33	0.58	0.09
10	0.23	0.20	1.49	0.10
11	0.62	0.45	-0.40	0.09
12	0.76	0.43	-1.11	0.10
13	0.48	0.21	0.26	0.09
14	0.38	0.45	0.73	0.09
15	0.66	0.37	-0.57	0.09
16	0.73	0.42	-0.94	0.10
17	0.34	0.30	0.89	0.09
18	0.71	0.56	-0.82	0.10
19	0.71	0.30	-0.84	0.10
20	0.72	0.50	-0.90	0.10
21	0.71	0.44	-0.82	0.10
22	0.39	0.29	0.65	0.09
23	0.48	0.46	0.25	0.09
24	0.68	0.48	-0.68	0.09
25	0.77	0.49	-1.17	0.10
26	0.38	0.45	0.69	0.09
27	0.45	0.33	0.40	0.09
28	0.52	0.27	0.05	0.09
29	0.52	0.29	0.08	0.09
30	0.49	0.37	0.18	0.09
31	0.44	0.29	0.45	0.09
32	0.68	0.41	-0.68	0.09
33	0.76	0.49	-1.14	0.10
34	0.32	0.33	0.99	0.09
35	0.69	0.46	-0.76	0.10
36	0.64	0.25	-0.50	0.09
37	0.72	0.50	-0.89	0.10
38	0.37	0.26	0.75	0.09
39	0.48	0.31	0.25	0.09
40	0.59	0.26	-0.24	0.09
41	0.43	0.29	0.46	0.09
42	0.32	0.24	1.02	0.10
43	0.54	0.40	-0.04	0.09
44	0.23	0.18	1.50	0.10
45	0.49	0.33	0.18	0.09
46	0.44	0.34	0.41	0.09
47	0.64	0.40	-0.47	0.09
48	0.48	0.36	0.27	0.09
49	0.42	0.23	0.53	0.09
50	0.28	0.16	1.21	0.10
Mean	0.53	0.35	0.02	0.09

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.93	0.50	-1.85	0.20
2	0.89	0.48	-1.39	0.17
3	0.96	0.30	-2.49	0.26
4	0.68	0.38	0.23	0.12
5	0.75	0.46	-0.20	0.13
6	0.88	0.46	-1.20	0.16
7	0.80	0.46	-0.55	0.14
8	0.29	0.21	2.19	0.12
9	0.89	0.25	-1.36	0.17
10	0.42	0.23	1.51	0.11
11	0.80	0.58	-0.53	0.13
12	0.80	0.50	-0.57	0.14
13	0.25	0.07	2.45	0.12
14	0.80	0.43	-0.51	0.13
15	0.60	0.45	0.64	0.11
16	0.88	0.46	-1.22	0.16
17	0.43	0.26	1.49	0.11
18	0.77	0.57	-0.30	0.13
19	0.76	0.39	-0.28	0.13
20	0.55	0.43	0.87	0.11
21	0.85	0.45	-0.92	0.15
22	0.60	0.38	0.63	0.11
23	0.70	0.48	0.12	0.12
24	0.65	0.48	0.36	0.12
25	0.61	0.31	0.58	0.11
26	0.76	0.43	-0.26	0.13
27	0.87	0.47	-1.12	0.16
28	0.72	0.47	-0.01	0.12
29	0.73	0.50	-0.10	0.12
30	0.72	0.53	0.01	0.12
31	0.80	0.49	-0.51	0.13
32	0.54	0.24	0.94	0.11
33	0.56	0.52	0.84	0.11
34	0.58	0.34	0.74	0.11
35	0.68	0.51	0.20	0.12
36	0.82	0.39	-0.68	0.14
37	0.88	0.42	-1.25	0.16
38	0.51	0.50	1.07	0.11
39	0.89	0.32	-1.36	0.17
40	0.76	0.34	-0.25	0.13
41	0.65	0.38	0.37	0.11
42	0.65	0.36	0.36	0.12
43	0.58	0.39	0.74	0.11
44	0.69	0.48	0.17	0.12
45	0.77	0.42	-0.33	0.13
46	0.75	0.35	-0.19	0.13
47	0.74	0.43	-0.16	0.12
48	0.82	0.46	-0.66	0.14
49	0.42	0.34	1.51	0.11
50	0.45	0.27	1.35	0.11
Mean	0.70	0.41	-0.02	0.13

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.88	0.39	-1.26	0.06
2	0.71	0.43	-0.09	0.05
3	0.48	0.34	1.05	0.04
4	0.89	0.25	-1.39	0.06
5	0.72	0.24	-0.12	0.05
6	0.60	0.48	0.48	0.04
7	0.66	0.30	0.20	0.04
8	0.83	0.35	-0.82	0.05
9	0.56	0.45	0.68	0.04
10	0.69	0.42	0.05	0.04
11	0.44	0.31	1.22	0.04
12	0.38	0.20	1.50	0.04
13	0.69	0.24	0.02	0.04
14	0.78	0.42	-0.47	0.05
15	0.52	0.36	0.86	0.04
16	0.78	0.23	-0.49	0.05
17	0.50	0.33	0.96	0.04
18	0.55	0.41	0.72	0.04
19	0.69	0.35	0.03	0.04
20	0.74	0.29	-0.23	0.05
21	0.85	0.40	-1.00	0.06
22	0.59	0.34	0.52	0.04
23	0.76	0.40	-0.36	0.05
24	0.62	0.41	0.36	0.04
25	0.74	0.48	-0.25	0.05
26	0.52	0.30	0.83	0.04
27	0.40	0.12	1.42	0.04
28	0.64	0.29	0.27	0.04
29	0.61	0.46	0.42	0.04
30	0.54	0.33	0.78	0.04
31	0.53	0.43	0.79	0.04
32	0.54	0.32	0.75	0.04
33	0.46	0.19	1.13	0.04
34	0.33	0.30	1.75	0.04
35	0.63	0.36	0.32	0.04
36	0.87	0.40	-1.14	0.06
37	0.81	0.36	-0.73	0.05
38	0.42	0.33	1.31	0.04
39	0.73	0.29	-0.20	0.05
40	0.58	0.33	0.55	0.04
41	0.88	0.42	-1.26	0.06
42	0.84	0.47	-0.94	0.06
43	0.55	0.42	0.71	0.04
44	0.61	0.47	0.41	0.04
45	0.77	0.34	-0.43	0.05
46	0.54	0.46	0.77	0.04
47	0.53	0.31	0.79	0.04
48	0.59	0.54	0.52	0.04
49	0.72	0.43	-0.13	0.05
50	0.80	0.35	-0.65	0.05
Mean	0.64	0.36	0.20	0.05

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.86	0.31	-1.37	0.13
2	0.64	0.44	0.08	0.10
3	0.52	0.44	0.66	0.09
4	0.41	0.23	1.20	0.09
5	0.63	0.23	0.14	0.09
6	0.69	0.38	-0.17	0.10
7	0.63	0.32	0.14	0.09
8	0.78	0.43	-0.71	0.11
9	0.78	0.54	-0.70	0.11
10	0.37	0.46	1.41	0.10
11	0.78	0.46	-0.71	0.11
12	0.57	0.46	0.41	0.09
13	0.64	0.28	0.08	0.10
14	0.78	0.45	-0.74	0.11
15	0.52	0.38	0.65	0.09
16	0.79	0.27	-0.81	0.11
17	0.80	0.36	-0.89	0.11
18	0.50	0.30	0.75	0.09
19	0.67	0.36	-0.10	0.10
20	0.36	0.27	1.44	0.10
21	0.80	0.41	-0.83	0.11
22	0.61	0.43	0.23	0.09
23	0.54	0.41	0.56	0.09
24	0.55	0.41	0.51	0.09
25	0.70	0.53	-0.22	0.10
26	0.30	0.23	1.78	0.10
27	0.65	0.53	0.05	0.10
28	0.54	0.39	0.59	0.09
29	0.60	0.54	0.29	0.09
30	0.58	0.46	0.37	0.09
31	0.53	0.43	0.61	0.09
32	0.43	0.27	1.13	0.09
33	0.52	0.56	0.69	0.09
34	0.71	0.45	-0.32	0.10
35	0.35	0.25	1.53	0.10
36	0.85	0.45	-1.22	0.12
37	0.67	0.58	-0.10	0.10
38	0.57	0.51	0.43	0.09
39	0.75	0.40	-0.53	0.10
40	0.60	0.41	0.29	0.09
41	0.84	0.49	-1.18	0.12
42	0.80	0.50	-0.86	0.11
43	0.58	0.45	0.38	0.09
44	0.62	0.50	0.17	0.09
45	0.52	0.36	0.69	0.09
46	0.49	0.35	0.81	0.09
47	0.40	0.12	1.28	0.09
48	0.56	0.58	0.50	0.09
49	0.74	0.43	-0.45	0.10
50	0.67	0.45	-0.06	0.10
Mean	0.62	0.40	0.16	0.10

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.85	0.47	-0.46	0.15
2	0.97	0.20	-2.37	0.30
3	0.86	0.50	-0.54	0.15
4	0.87	0.42	-0.69	0.16
5	0.97	0.32	-2.20	0.28
6	0.71	0.30	0.56	0.12
7	0.78	0.40	0.09	0.13
8	0.93	0.44	-1.32	0.20
9	0.57	0.24	1.30	0.11
10	0.70	0.51	0.57	0.12
11	0.93	0.36	-1.35	0.20
12	0.65	0.42	0.86	0.12
13	0.88	0.26	-0.76	0.16
14	0.82	0.52	-0.21	0.14
15	0.95	0.41	-1.76	0.23
16	0.68	0.53	0.69	0.12
17	0.83	0.36	-0.27	0.14
18	0.92	0.30	-1.21	0.19
19	0.65	0.28	0.86	0.12
20	0.55	0.28	1.38	0.11
21	0.56	0.32	1.31	0.11
22	0.75	0.55	0.29	0.13
23	0.64	0.58	0.93	0.11
24	0.76	0.33	0.22	0.13
25	0.79	0.40	0.00	0.13
26	0.85	0.56	-0.43	0.15
27	0.84	0.32	-0.33	0.14
28	0.75	0.32	0.31	0.12
29	0.85	0.61	-0.46	0.15
30	0.57	0.38	1.25	0.11
31	0.90	0.42	-0.92	0.17
32	0.79	0.50	0.06	0.13
33	0.85	0.50	-0.48	0.15
34	0.81	0.46	-0.10	0.14
35	0.75	0.37	0.29	0.13
36	0.92	0.29	-1.21	0.19
37	0.86	0.24	-0.54	0.15
38	0.79	0.46	0.06	0.13
39	0.79	0.48	0.02	0.13
40	0.78	0.43	0.10	0.13
41	0.74	0.40	0.35	0.12
42	0.73	0.32	0.41	0.12
43	0.71	0.37	0.51	0.12
44	0.64	0.28	0.93	0.11
45	0.67	0.40	0.76	0.12
46	0.82	0.50	-0.21	0.14
47	0.81	0.51	-0.14	0.14
48	0.69	0.59	0.63	0.12
49	0.63	0.20	0.99	0.11
50	0.56	0.21	1.32	0.11
Mean	0.77	0.40	-0.02	0.14

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.84	0.48	-0.89	0.06
2	0.85	0.42	-0.95	0.06
3	0.43	0.24	1.37	0.04
4	0.87	0.38	-1.11	0.06
5	0.72	0.42	-0.09	0.05
6	0.76	0.46	-0.30	0.05
7	0.82	0.25	-0.68	0.05
8	0.60	0.47	0.56	0.04
9	0.94	0.30	-2.03	0.08
10	0.69	0.45	0.13	0.05
11	0.87	0.44	-1.19	0.06
12	0.57	0.32	0.70	0.04
13	0.52	0.25	0.95	0.04
14	0.64	0.21	0.35	0.04
15	0.47	0.28	1.17	0.04
16	0.84	0.44	-0.91	0.06
17	0.54	0.29	0.83	0.04
18	0.40	0.31	1.54	0.04
19	0.59	0.35	0.62	0.04
20	0.61	0.30	0.51	0.04
21	0.54	0.42	0.87	0.04
22	0.64	0.43	0.34	0.04
23	0.40	0.29	1.51	0.04
24	0.70	0.41	0.05	0.05
25	0.81	0.49	-0.62	0.05
26	0.92	0.48	-1.80	0.08
27	0.86	0.44	-1.07	0.06
28	0.80	0.48	-0.59	0.05
29	0.79	0.43	-0.49	0.05
30	0.77	0.44	-0.35	0.05
31	0.42	0.32	1.40	0.04
32	0.53	0.36	0.90	0.04
33	0.79	0.53	-0.52	0.05
34	0.88	0.45	-1.23	0.06
35	0.47	0.31	1.17	0.04
36	0.56	0.39	0.73	0.04
37	0.55	0.39	0.81	0.04
38	0.90	0.46	-1.47	0.07
39	0.74	0.48	-0.16	0.05
40	0.60	0.45	0.56	0.04
Mean	0.68	0.39	0.01	0.05

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.94	0.11	-2.51	0.19
2	0.80	0.47	-0.86	0.11
3	0.39	0.32	1.30	0.09
4	0.76	0.36	-0.60	0.10
5	0.69	0.40	-0.19	0.10
6	0.65	0.35	0.03	0.09
7	0.58	0.22	0.39	0.09
8	0.35	0.18	1.51	0.09
9	0.90	0.38	-1.83	0.15
10	0.66	0.37	-0.02	0.09
11	0.82	0.55	-0.99	0.11
12	0.63	0.33	0.16	0.09
13	0.54	0.32	0.58	0.09
14	0.55	0.25	0.54	0.09
15	0.50	0.37	0.79	0.09
16	0.67	0.50	-0.07	0.09
17	0.64	0.45	0.11	0.09
18	0.38	0.31	1.36	0.09
19	0.68	0.46	-0.14	0.10
20	0.56	0.39	0.48	0.09
21	0.49	0.37	0.80	0.09
22	0.47	0.33	0.91	0.09
23	0.70	0.45	-0.25	0.10
24	0.61	0.30	0.23	0.09
25	0.80	0.57	-0.88	0.11
26	0.88	0.55	-1.61	0.14
27	0.72	0.45	-0.36	0.10
28	0.86	0.62	-1.39	0.13
29	0.79	0.54	-0.81	0.11
30	0.82	0.56	-1.01	0.11
31	0.37	0.35	1.37	0.09
32	0.49	0.36	0.84	0.09
33	0.75	0.58	-0.53	0.10
34	0.85	0.57	-1.27	0.12
35	0.59	0.39	0.32	0.09
36	0.58	0.44	0.39	0.09
37	0.55	0.43	0.55	0.09
38	0.85	0.54	-1.24	0.12
39	0.69	0.45	-0.19	0.10
40	0.71	0.46	-0.31	0.10
Mean	0.66	0.41	-0.11	0.10

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.96	0.43	-1.75	0.27
2	0.92	0.34	-0.85	0.20
3	0.83	0.44	0.16	0.15
4	0.56	0.46	1.85	0.12
5	0.84	0.43	0.03	0.15
6	0.77	0.25	0.64	0.13
7	0.67	0.44	1.23	0.12
8	0.92	0.53	-0.89	0.20
9	0.68	0.56	1.22	0.12
10	0.87	0.52	-0.24	0.16
11	0.58	0.43	1.78	0.12
12	0.66	0.43	1.33	0.12
13	0.85	0.41	-0.09	0.16
14	0.63	0.53	1.51	0.12
15	0.94	0.48	-1.23	0.22
16	0.71	0.40	0.98	0.13
17	0.86	0.59	-0.21	0.16
18	0.60	0.36	1.63	0.12
19	0.87	0.51	-0.29	0.17
20	0.81	0.48	0.31	0.14
21	0.74	0.58	0.79	0.13
22	0.94	0.48	-1.33	0.23
23	0.70	0.49	1.06	0.12
24	0.81	0.49	0.27	0.14
25	0.93	0.49	-1.14	0.22
26	0.90	0.51	-0.68	0.19
27	0.95	0.53	-1.50	0.24
28	0.97	0.51	-1.97	0.29
29	0.93	0.51	-1.19	0.22
30	0.75	0.25	0.72	0.13
31	0.75	0.50	0.72	0.13
32	0.91	0.56	-0.78	0.19
33	0.89	0.58	-0.55	0.18
34	0.93	0.49	-1.01	0.21
35	0.70	0.39	1.09	0.12
36	0.92	0.51	-0.93	0.20
37	0.61	0.34	1.59	0.12
38	0.85	0.48	-0.09	0.16
39	0.86	0.47	-0.19	0.16
40	0.82	0.49	0.24	0.15
Mean	0.81	0.47	0.06	0.16

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.96	0.24	-2.50	0.10
2	0.85	0.29	-1.05	0.06
3	0.72	0.44	-0.14	0.05
4	0.82	0.40	-0.82	0.06
5	0.98	0.26	-3.10	0.13
6	0.46	0.36	1.23	0.04
7	0.96	0.36	-2.50	0.10
8	0.75	0.32	-0.31	0.05
9	0.62	0.19	0.44	0.04
10	0.85	0.38	-1.03	0.06
11	0.69	0.38	0.08	0.05
12	0.55	0.42	0.77	0.04
13	0.74	0.35	-0.26	0.05
14	0.62	0.38	0.42	0.04
15	0.78	0.50	-0.49	0.05
16	0.47	0.31	1.18	0.04
17	0.86	0.48	-1.12	0.06
18	0.78	0.47	-0.51	0.05
19	0.70	0.49	-0.02	0.05
20	0.72	0.53	-0.13	0.05
21	0.68	0.45	0.09	0.05
22	0.63	0.30	0.39	0.04
23	0.78	0.49	-0.49	0.05
24	0.51	0.39	0.97	0.04
25	0.48	0.39	1.13	0.04
26	0.75	0.43	-0.28	0.05
27	0.49	0.45	1.08	0.04
28	0.71	0.37	-0.04	0.05
29	0.82	0.48	-0.80	0.05
30	0.64	0.45	0.34	0.04
31	0.69	0.44	0.03	0.05
32	0.60	0.45	0.52	0.04
33	0.61	0.45	0.49	0.04
34	0.67	0.49	0.15	0.05
35	0.79	0.53	-0.60	0.05
36	0.65	0.54	0.27	0.05
37	0.75	0.54	-0.30	0.05
38	0.45	0.29	1.26	0.04
39	0.57	0.58	0.69	0.04
40	0.46	0.34	1.21	0.04
41	0.45	0.35	1.28	0.04
42	0.74	0.57	-0.22	0.05
Mean	0.69	0.41	-0.06	0.05

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.91	0.30	-1.91	0.12
2	0.84	0.34	-1.15	0.10
3	0.69	0.27	-0.12	0.08
4	0.95	0.38	-2.65	0.17
5	0.93	0.36	-2.25	0.14
6	0.92	0.39	-2.00	0.13
7	0.60	0.41	0.34	0.08
8	0.51	0.34	0.77	0.07
9	0.74	0.52	-0.41	0.08
10	0.74	0.48	-0.41	0.08
11	0.52	0.37	0.75	0.07
12	0.66	0.44	0.03	0.08
13	0.36	0.22	1.51	0.08
14	0.54	0.45	0.66	0.07
15	0.83	0.50	-1.02	0.10
16	0.60	0.46	0.33	0.08
17	0.72	0.51	-0.30	0.08
18	0.75	0.52	-0.49	0.08
19	0.60	0.38	0.34	0.08
20	0.59	0.40	0.41	0.08
21	0.80	0.57	-0.86	0.09
22	0.58	0.47	0.46	0.08
23	0.68	0.40	-0.08	0.08
24	0.60	0.28	0.33	0.08
25	0.60	0.44	0.34	0.08
26	0.53	0.33	0.69	0.07
27	0.68	0.41	-0.10	0.08
28	0.69	0.42	-0.14	0.08
29	0.78	0.46	-0.70	0.09
30	0.59	0.43	0.42	0.08
31	0.66	0.41	0.02	0.08
32	0.58	0.40	0.43	0.08
33	0.58	0.44	0.45	0.08
34	0.63	0.51	0.18	0.08
35	0.74	0.57	-0.45	0.08
36	0.61	0.53	0.32	0.08
37	0.73	0.55	-0.39	0.08
38	0.44	0.27	1.12	0.07
39	0.53	0.52	0.71	0.07
40	0.45	0.32	1.08	0.07
41	0.40	0.30	1.32	0.08
42	0.70	0.56	-0.19	0.08
Mean	0.66	0.42	-0.06	0.08

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.71	0.30	-0.70	0.04
2	0.48	0.41	0.48	0.04
3	0.68	0.42	-0.50	0.04
4	0.33	0.33	1.26	0.04
5	0.64	0.42	-0.28	0.04
6	0.69	0.44	-0.54	0.04
7	0.64	0.39	-0.31	0.04
8	0.59	0.52	-0.07	0.04
9	0.44	0.47	0.69	0.04
10	0.49	0.55	0.47	0.04
11	0.84	0.38	-1.51	0.05
12	0.63	0.51	-0.27	0.04
13	0.44	0.43	0.70	0.04
14	0.45	0.44	0.66	0.04
15	0.63	0.40	-0.26	0.04
16	0.46	0.39	0.61	0.04
17	0.52	0.14	0.30	0.04
18	0.39	0.37	0.97	0.04
19	0.67	0.40	-0.45	0.04
20	0.67	0.38	-0.44	0.04
21	0.75	0.48	-0.94	0.05
22	0.51	0.38	0.37	0.04
23	0.73	0.32	-0.81	0.04
24	0.39	0.53	0.93	0.04
25	0.63	0.50	-0.23	0.04
26	0.59	0.46	-0.06	0.04
27	0.69	0.47	-0.56	0.04
28	0.64	0.44	-0.28	0.04
29	0.73	0.36	-0.82	0.04
30	0.57	0.51	0.03	0.04
31	0.63	0.42	-0.23	0.04
32	0.46	0.53	0.60	0.04
33	0.57	0.44	0.05	0.04
34	0.48	0.21	0.50	0.04
35	0.74	0.43	-0.84	0.04
36	0.61	0.45	-0.14	0.04
37	0.52	0.49	0.31	0.04
38	0.59	0.47	-0.05	0.04
39	0.56	0.45	0.10	0.04
40	0.52	0.53	0.29	0.04
41	0.63	0.50	-0.25	0.04
42	0.65	0.19	-0.36	0.04
43	0.71	0.44	-0.67	0.04
44	0.85	0.46	-1.61	0.05
45	0.72	0.42	-0.71	0.04
46	0.64	0.43	-0.31	0.04
47	0.75	0.39	-0.89	0.04
48	0.62	0.46	-0.18	0.04
49	0.52	0.42	0.29	0.04
50	0.59	0.39	-0.05	0.04
Mean	0.60	0.42	-0.11	0.04

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.68	0.32	-0.88	0.07
2	0.40	0.50	0.44	0.06
3	0.50	0.36	-0.04	0.06
4	0.28	0.30	1.08	0.07
5	0.56	0.42	-0.28	0.06
6	0.86	0.27	-2.05	0.09
7	0.63	0.30	-0.65	0.06
8	0.50	0.46	-0.01	0.06
9	0.41	0.27	0.39	0.06
10	0.50	0.46	-0.04	0.06
11	0.73	0.36	-1.15	0.07
12	0.63	0.50	-0.61	0.06
13	0.38	0.35	0.54	0.06
14	0.36	0.39	0.65	0.07
15	0.53	0.42	-0.15	0.06
16	0.40	0.25	0.45	0.06
17	0.52	0.06	-0.12	0.06
18	0.38	0.28	0.54	0.06
19	0.65	0.37	-0.74	0.07
20	0.63	0.28	-0.62	0.06
21	0.61	0.47	-0.51	0.06
22	0.71	0.43	-1.06	0.07
23	0.66	0.36	-0.76	0.07
24	0.37	0.42	0.60	0.07
25	0.60	0.49	-0.48	0.06
26	0.64	0.42	-0.66	0.06
27	0.60	0.50	-0.47	0.06
28	0.38	0.46	0.52	0.06
29	0.54	0.32	-0.21	0.06
30	0.60	0.48	-0.48	0.06
31	0.52	0.47	-0.11	0.06
32	0.32	0.48	0.83	0.07
33	0.37	0.28	0.60	0.07
34	0.42	0.25	0.34	0.06
35	0.59	0.36	-0.43	0.06
36	0.43	0.33	0.29	0.06
37	0.47	0.27	0.14	0.06
38	0.58	0.47	-0.38	0.06
39	0.47	0.35	0.11	0.06
40	0.41	0.48	0.40	0.06
41	0.53	0.54	-0.18	0.06
42	0.48	0.17	0.06	0.06
43	0.66	0.41	-0.76	0.07
44	0.79	0.47	-1.52	0.07
45	0.65	0.38	-0.72	0.06
46	0.49	0.50	0.01	0.06
47	0.66	0.38	-0.80	0.07
48	0.35	0.26	0.67	0.07
49	0.41	0.23	0.40	0.06
50	0.48	0.30	0.08	0.06
Mean	0.53	0.37	-0.15	0.06

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.78	0.40	-0.60	0.06
2	0.69	0.46	-0.05	0.05
3	0.88	0.41	-1.39	0.07
4	0.68	0.50	-0.03	0.05
5	0.83	0.35	-0.98	0.06
6	0.89	0.37	-1.52	0.07
7	0.82	0.35	-0.87	0.06
8	0.60	0.45	0.39	0.05
9	0.69	0.43	-0.07	0.05
10	0.39	0.46	1.38	0.05
11	0.63	0.46	0.23	0.05
12	0.84	0.23	-1.01	0.06
13	0.64	0.26	0.16	0.05
14	0.81	0.37	-0.79	0.06
15	0.60	0.35	0.40	0.05
16	0.78	0.34	-0.62	0.06
17	0.71	0.40	-0.16	0.05
18	0.52	0.46	0.75	0.05
19	0.62	0.52	0.28	0.05
20	0.63	0.49	0.26	0.05
21	0.35	0.46	1.58	0.05
22	0.49	0.46	0.92	0.05
23	0.53	0.40	0.72	0.05
24	0.76	0.48	-0.46	0.05
25	0.72	0.20	-0.23	0.05
26	0.76	0.39	-0.45	0.05
27	0.58	0.42	0.47	0.05
28	0.51	0.40	0.80	0.05
29	0.28	0.42	2.01	0.05
30	0.40	0.30	1.33	0.05
31	0.38	0.24	1.46	0.05
32	0.72	0.29	-0.23	0.05
33	0.71	0.40	-0.16	0.05
34	0.81	0.35	-0.81	0.06
35	0.36	0.31	1.54	0.05
36	0.53	0.44	0.71	0.05
37	0.60	0.39	0.36	0.05
38	0.67	0.41	0.04	0.05
39	0.74	0.31	-0.37	0.05
40	0.47	0.39	1.02	0.05
41	0.67	0.40	0.05	0.05
42	0.52	0.33	0.79	0.05
43	0.49	0.33	0.92	0.05
44	0.65	0.35	0.14	0.05
45	0.50	0.31	0.88	0.05
Mean	0.63	0.38	0.19	0.05

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.73	0.42	-0.58	0.09
2	0.87	0.37	-1.60	0.12
3	0.78	0.43	-0.92	0.10
4	0.55	0.38	0.32	0.08
5	0.71	0.46	-0.49	0.09
6	0.83	0.31	-1.20	0.10
7	0.80	0.40	-1.00	0.10
8	0.55	0.42	0.31	0.08
9	0.69	0.40	-0.36	0.09
10	0.69	0.46	-0.38	0.09
11	0.54	0.39	0.34	0.08
12	0.85	0.28	-1.38	0.11
13	0.39	0.33	1.05	0.08
14	0.76	0.33	-0.78	0.09
15	0.51	0.33	0.47	0.08
16	0.77	0.38	-0.85	0.10
17	0.61	0.36	0.01	0.08
18	0.59	0.45	0.12	0.08
19	0.60	0.48	0.05	0.08
20	0.57	0.45	0.19	0.08
21	0.30	0.34	1.48	0.09
22	0.37	0.33	1.13	0.09
23	0.32	0.52	1.37	0.09
24	0.46	0.36	0.69	0.08
25	0.53	0.41	0.38	0.08
26	0.73	0.35	-0.62	0.09
27	0.75	0.47	-0.73	0.09
28	0.49	0.33	0.57	0.08
29	0.41	0.22	0.94	0.08
30	0.33	0.20	1.34	0.09
31	0.36	0.13	1.16	0.09
32	0.78	0.43	-0.91	0.10
33	0.54	0.46	0.34	0.08
34	0.67	0.41	-0.27	0.09
35	0.47	0.29	0.64	0.08
36	0.43	0.31	0.84	0.08
37	0.55	0.28	0.31	0.08
38	0.58	0.40	0.15	0.08
39	0.52	0.17	0.44	0.08
40	0.29	0.19	1.52	0.09
41	0.53	0.33	0.38	0.08
42	0.48	0.31	0.62	0.08
43	0.74	0.41	-0.67	0.09
44	0.56	0.21	0.25	0.08
45	0.46	0.27	0.69	0.08
Mean	0.58	0.35	0.12	0.09

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.80	0.34	-1.09	0.06
2	0.95	0.22	-2.80	0.11
3	0.49	0.45	0.58	0.05
4	0.62	0.44	-0.04	0.05
5	0.73	0.39	-0.65	0.06
6	0.41	0.38	0.96	0.05
7	0.67	0.38	-0.31	0.05
8	0.67	0.43	-0.29	0.05
9	0.53	0.30	0.38	0.05
10	0.75	0.41	-0.76	0.06
11	0.66	0.45	-0.24	0.05
12	0.53	0.46	0.39	0.05
13	0.61	0.45	-0.01	0.05
14	0.43	0.14	0.88	0.05
15	0.57	0.48	0.17	0.05
16	0.59	0.36	0.11	0.05
17	0.44	0.40	0.81	0.05
18	0.78	0.39	-0.94	0.06
19	0.33	0.34	1.37	0.05
20	0.62	0.28	-0.06	0.05
21	0.74	0.38	-0.68	0.06
22	0.79	0.39	-1.03	0.06
23	0.42	0.34	0.91	0.05
24	0.39	0.32	1.06	0.05
25	0.66	0.43	-0.27	0.05
26	0.58	0.41	0.14	0.05
27	0.50	0.50	0.55	0.05
28	0.71	0.43	-0.50	0.05
29	0.52	0.53	0.44	0.05
30	0.45	0.48	0.78	0.05
31	0.70	0.42	-0.46	0.05
32	0.53	0.48	0.38	0.05
33	0.56	0.32	0.24	0.05
34	0.72	0.45	-0.58	0.06
35	0.55	0.46	0.27	0.05
36	0.79	0.40	-1.04	0.06
37	0.74	0.43	-0.71	0.06
38	0.69	0.47	-0.42	0.05
39	0.51	0.42	0.49	0.05
40	0.73	0.38	-0.61	0.06
41	0.48	0.44	0.61	0.05
42	0.62	0.38	-0.05	0.05
43	0.56	0.45	0.22	0.05
44	0.45	0.47	0.75	0.05
45	0.44	0.47	0.81	0.05
46	0.65	0.37	-0.20	0.05
47	0.64	0.26	-0.15	0.05
48	0.74	0.29	-0.69	0.06
49	0.42	0.32	0.90	0.05
50	0.41	0.35	0.97	0.05
Mean	0.60	0.39	0.01	0.05

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.67	0.32	-0.95	0.12
2	0.52	-0.03	-0.24	0.12
3	0.47	0.30	-0.02	0.12
4	0.41	0.48	0.26	0.12
5	0.43	0.38	0.19	0.12
6	0.84	0.36	-1.94	0.15
7	0.71	0.27	-1.15	0.13
8	0.47	0.50	-0.02	0.12
9	0.42	0.43	0.20	0.12
10	0.64	0.40	-0.80	0.12
11	0.65	0.43	-0.83	0.12
12	0.46	0.23	0.02	0.12
13	0.73	0.35	-1.27	0.13
14	0.36	0.14	0.53	0.12
15	0.57	0.32	-0.48	0.12
16	0.58	0.38	-0.53	0.12
17	0.40	0.32	0.29	0.12
18	0.62	0.32	-0.71	0.12
19	0.34	0.24	0.59	0.13
20	0.50	0.21	-0.13	0.12
21	0.49	0.40	-0.10	0.12
22	0.59	0.47	-0.56	0.12
23	0.55	0.37	-0.36	0.12
24	0.40	0.38	0.32	0.12
25	0.53	0.46	-0.31	0.12
26	0.53	0.42	-0.27	0.12
27	0.49	0.35	-0.09	0.12
28	0.69	0.43	-1.04	0.13
29	0.39	0.45	0.35	0.12
30	0.50	0.45	-0.13	0.12
31	0.71	0.40	-1.17	0.13
32	0.47	0.36	-0.03	0.12
33	0.44	0.23	0.13	0.12
34	0.64	0.47	-0.82	0.12
35	0.44	0.41	0.13	0.12
36	0.79	0.42	-1.61	0.14
37	0.66	0.39	-0.92	0.12
38	0.60	0.47	-0.59	0.12
39	0.59	0.50	-0.56	0.12
40	0.68	0.37	-1.01	0.13
41	0.44	0.38	0.13	0.12
42	0.37	0.26	0.47	0.12
43	0.52	0.29	-0.23	0.12
44	0.48	0.51	-0.08	0.12
45	0.43	0.42	0.16	0.12
46	0.55	0.40	-0.39	0.12
47	0.50	0.38	-0.14	0.12
48	0.75	0.20	-1.39	0.13
49	0.44	0.32	0.15	0.12
50	0.50	0.28	-0.17	0.12
Mean	0.54	0.36	-0.34	0.12

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.91	0.27	-2.27	0.07
2	0.86	0.13	-1.75	0.05
3	0.89	0.33	-2.07	0.06
4	0.58	0.52	-0.13	0.04
5	0.44	0.22	0.50	0.04
6	0.61	0.38	-0.29	0.04
7	0.57	0.36	-0.09	0.04
8	0.81	0.34	-1.34	0.05
9	0.56	0.37	-0.03	0.04
10	0.81	0.36	-1.37	0.05
11	0.52	0.23	0.16	0.04
12	0.36	0.25	0.88	0.04
13	0.47	0.44	0.37	0.04
14	0.52	0.21	0.16	0.04
15	0.51	0.40	0.17	0.04
16	0.55	0.50	0.00	0.04
17	0.72	0.43	-0.80	0.04
18	0.53	0.39	0.08	0.04
19	0.60	0.35	-0.24	0.04
20	0.46	0.28	0.41	0.04
21	0.71	0.42	-0.77	0.04
22	0.41	0.45	0.66	0.04
23	0.53	0.33	0.08	0.04
24	0.55	0.28	0.01	0.04
25	0.28	0.27	1.31	0.04
26	0.69	0.39	-0.66	0.04
27	0.43	0.28	0.54	0.04
28	0.49	0.37	0.29	0.04
29	0.36	0.25	0.88	0.04
30	0.44	0.22	0.52	0.04
31	0.43	0.26	0.53	0.04
32	0.64	0.31	-0.42	0.04
33	0.42	0.37	0.61	0.04
34	0.42	0.34	0.60	0.04
35	0.54	0.39	0.07	0.04
36	0.83	0.37	-1.51	0.05
37	0.68	0.34	-0.62	0.04
38	0.72	0.43	-0.84	0.04
39	0.44	0.39	0.51	0.04
40	0.53	0.41	0.09	0.04
41	0.40	0.47	0.67	0.04
42	0.46	0.44	0.40	0.04
43	0.59	0.33	-0.16	0.04
44	0.41	0.26	0.64	0.04
45	0.44	0.43	0.52	0.04
46	0.30	0.18	1.21	0.04
47	0.48	0.39	0.33	0.04
48	0.54	0.45	0.06	0.04
49	0.66	0.53	-0.53	0.04
50	0.41	0.35	0.66	0.04
51	0.50	0.32	0.22	0.04
52	0.44	0.18	0.51	0.04
53	0.55	0.38	0.02	0.04
54	0.28	0.21	1.28	0.04
55	0.49	0.37	0.29	0.04
56	0.72	0.47	-0.82	0.04
57	0.34	0.23	0.97	0.04
58	0.64	0.44	-0.41	0.04
59	0.38	0.34	0.80	0.04
60	0.48	0.41	0.32	0.04
61	0.50	0.20	0.25	0.04
Mean	0.54	0.34	0.02	0.04

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.91	0.29	-2.22	0.13
2	0.71	0.47	-0.72	0.09
3	0.88	0.33	-1.90	0.12
4	0.57	0.52	-0.07	0.08
5	0.48	0.26	0.33	0.08
6	0.62	0.32	-0.31	0.08
7	0.61	0.39	-0.26	0.08
8	0.77	0.39	-1.09	0.09
9	0.57	0.36	-0.06	0.08
10	0.77	0.38	-1.08	0.09
11	0.61	0.36	-0.26	0.08
12	0.23	0.37	1.64	0.09
13	0.85	0.31	-1.62	0.11
14	0.47	0.39	0.40	0.08
15	0.73	0.35	-0.85	0.09
16	0.59	0.43	-0.16	0.08
17	0.79	0.48	-1.24	0.10
18	0.40	0.39	0.74	0.08
19	0.57	0.37	-0.06	0.08
20	0.48	0.26	0.36	0.08
21	0.70	0.37	-0.69	0.09
22	0.36	0.37	0.93	0.08
23	0.55	0.18	0.05	0.08
24	0.24	0.12	1.54	0.09
25	0.57	0.35	-0.06	0.08
26	0.69	0.44	-0.64	0.08
27	0.50	0.37	0.24	0.08
28	0.19	0.23	1.92	0.10
29	0.33	0.25	1.06	0.08
30	0.45	0.27	0.47	0.08
31	0.47	0.26	0.40	0.08
32	0.66	0.44	-0.51	0.08
33	0.58	0.38	-0.11	0.08
34	0.40	0.33	0.73	0.08
35	0.49	0.40	0.31	0.08
36	0.56	0.28	-0.02	0.08
37	0.62	0.35	-0.31	0.08
38	0.71	0.42	-0.75	0.09
39	0.51	0.33	0.20	0.08
40	0.81	0.34	-1.33	0.10
41	0.45	0.42	0.48	0.08
42	0.42	0.46	0.62	0.08
43	0.57	0.30	-0.06	0.08
44	0.50	0.35	0.27	0.08
45	0.27	0.23	1.41	0.09
46	0.45	0.36	0.50	0.08
47	0.58	0.48	-0.11	0.08
48	0.52	0.36	0.18	0.08
49	0.41	0.24	0.67	0.08
50	0.62	0.38	-0.30	0.08
51	0.72	0.40	-0.81	0.09
52	0.48	0.20	0.35	0.08
53	0.54	0.36	0.09	0.08
54	0.21	0.20	1.73	0.10
55	0.77	0.46	-1.08	0.09
56	0.54	0.38	0.10	0.08
57	0.30	0.19	1.21	0.09
58	0.49	0.39	0.29	0.08
59	0.42	0.31	0.65	0.08
60	0.47	0.38	0.41	0.08
61	0.46	0.44	0.43	0.08
Mean	0.54	0.35	0.03	0.08

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.82	0.38	-1.40	0.06
2	0.84	0.42	-1.52	0.06
3	0.67	0.41	-0.51	0.05
4	0.75	0.36	-0.96	0.05
5	0.78	0.34	-1.15	0.06
6	0.51	0.28	0.26	0.05
7	0.73	0.40	-0.84	0.05
8	0.67	0.34	-0.51	0.05
9	0.55	0.38	0.09	0.05
10	0.46	0.33	0.50	0.05
11	0.68	0.37	-0.56	0.05
12	0.44	0.37	0.59	0.05
13	0.77	0.43	-1.05	0.06
14	0.55	0.43	0.08	0.05
15	0.58	0.36	-0.05	0.05
16	0.64	0.29	-0.35	0.05
17	0.62	0.39	-0.28	0.05
18	0.78	0.44	-1.15	0.06
19	0.62	0.41	-0.27	0.05
20	0.63	0.36	-0.29	0.05
21	0.40	0.34	0.78	0.05
22	0.47	0.34	0.45	0.05
23	0.80	0.40	-1.24	0.06
24	0.32	0.24	1.15	0.05
25	0.79	0.41	-1.22	0.06
26	0.89	0.36	-2.06	0.07
27	0.41	0.31	0.70	0.05
28	0.58	0.48	-0.07	0.05
29	0.49	0.30	0.34	0.05
30	0.34	0.28	1.08	0.05
31	0.56	0.24	0.01	0.05
32	0.55	0.38	0.08	0.05
33	0.41	0.25	0.73	0.05
34	0.62	0.42	-0.28	0.05
35	0.51	0.18	0.25	0.05
36	0.42	0.45	0.66	0.05
37	0.50	0.34	0.29	0.05
38	0.26	0.28	1.51	0.05
39	0.67	0.41	-0.51	0.05
40	0.50	0.40	0.32	0.05
41	0.50	0.37	0.29	0.05
42	0.40	0.41	0.77	0.05
43	0.66	0.31	-0.44	0.05
44	0.76	0.48	-1.00	0.05
45	0.69	0.49	-0.61	0.05
46	0.68	0.35	-0.56	0.05
47	0.35	0.26	1.02	0.05
48	0.63	0.41	-0.33	0.05
49	0.67	0.51	-0.50	0.05
50	0.58	0.43	-0.06	0.05
51	0.46	0.23	0.51	0.05
52	0.58	0.36	-0.07	0.05
53	0.26	0.30	1.52	0.05
54	0.61	0.27	-0.22	0.05
55	0.39	0.40	0.81	0.05
56	0.31	0.36	1.25	0.05
57	0.49	0.46	0.33	0.05
58	0.67	0.36	-0.52	0.05
59	0.36	0.25	0.96	0.05
60	0.65	0.54	-0.39	0.05
61	0.73	0.41	-0.85	0.05
Mean	0.57	0.36	-0.07	0.05

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.86	0.39	-1.75	0.11
2	0.77	0.49	-1.09	0.09
3	0.65	0.29	-0.42	0.08
4	0.52	0.38	0.21	0.08
5	0.79	0.38	-1.17	0.09
6	0.59	0.52	-0.13	0.08
7	0.59	0.23	-0.10	0.08
8	0.87	0.44	-1.81	0.11
9	0.47	0.29	0.42	0.08
10	0.75	0.43	-0.93	0.08
11	0.64	0.41	-0.35	0.08
12	0.31	0.22	1.22	0.08
13	0.60	0.36	-0.16	0.08
14	0.63	0.47	-0.30	0.08
15	0.73	0.42	-0.83	0.08
16	0.28	0.28	1.36	0.08
17	0.60	0.42	-0.16	0.08
18	0.53	0.33	0.14	0.08
19	0.87	0.39	-1.84	0.11
20	0.59	0.36	-0.14	0.08
21	0.38	0.18	0.84	0.08
22	0.61	0.23	-0.24	0.08
23	0.74	0.43	-0.87	0.08
24	0.63	0.35	-0.32	0.08
25	0.48	0.44	0.41	0.08
26	0.42	0.31	0.68	0.08
27	0.36	0.27	0.94	0.08
28	0.57	0.47	-0.02	0.08
29	0.44	0.33	0.57	0.08
30	0.36	0.32	0.98	0.08
31	0.73	0.43	-0.83	0.08
32	0.53	0.42	0.16	0.08
33	0.53	0.46	0.17	0.08
34	0.44	0.20	0.56	0.08
35	0.43	0.29	0.62	0.08
36	0.34	0.31	1.05	0.08
37	0.30	0.18	1.27	0.08
38	0.69	0.34	-0.63	0.08
39	0.53	0.39	0.15	0.08
40	0.46	0.40	0.47	0.08
41	0.45	0.33	0.51	0.08
42	0.35	0.40	1.02	0.08
43	0.62	0.33	-0.25	0.08
44	0.72	0.51	-0.75	0.08
45	0.77	0.31	-1.04	0.09
46	0.59	0.45	-0.13	0.08
47	0.63	0.51	-0.33	0.08
48	0.69	0.38	-0.60	0.08
49	0.47	0.36	0.44	0.08
50	0.63	0.46	-0.30	0.08
51	0.47	0.39	0.45	0.08
52	0.52	0.34	0.19	0.08
53	0.47	0.43	0.46	0.08
54	0.42	0.25	0.65	0.08
55	0.64	0.49	-0.35	0.08
56	0.33	0.39	1.13	0.08
57	0.53	0.48	0.15	0.08
58	0.59	0.41	-0.14	0.08
59	0.39	0.30	0.83	0.08
60	0.51	0.18	0.25	0.08
61	0.56	0.28	0.03	0.08
Mean	0.56	0.36	0.01	0.08

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.53	0.27	0.09	0.06
2	0.56	0.37	-0.06	0.06
3	0.50	0.43	0.20	0.06
4	0.47	0.37	0.37	0.06
5	0.46	0.48	0.39	0.06
6	0.58	0.38	-0.16	0.06
7	0.62	0.39	-0.33	0.06
8	0.49	0.25	0.24	0.06
9	0.54	0.43	0.01	0.06
10	0.65	0.50	-0.51	0.06
11	0.45	0.29	0.46	0.06
12	0.65	0.51	-0.48	0.06
13	0.39	0.37	0.72	0.06
14	0.57	0.42	-0.14	0.06
15	0.67	0.45	-0.61	0.06
16	0.56	0.45	-0.06	0.06
17	0.64	0.40	-0.46	0.06
18	0.63	0.32	-0.40	0.06
19	0.52	0.48	0.10	0.06
20	0.80	0.44	-1.35	0.07
21	0.68	0.39	-0.65	0.06
22	0.50	0.46	0.23	0.06
23	0.82	0.45	-1.49	0.07
24	0.55	0.48	-0.01	0.06
25	0.48	0.36	0.31	0.06
26	0.35	0.31	0.94	0.06
27	0.46	0.37	0.40	0.06
28	0.49	0.32	0.24	0.06
29	0.38	0.23	0.77	0.06
30	0.53	0.42	0.07	0.06
31	0.49	0.31	0.27	0.06
32	0.43	0.42	0.53	0.06
33	0.65	0.33	-0.50	0.06
34	0.38	0.25	0.78	0.06
35	0.41	0.37	0.62	0.06
36	0.44	0.34	0.48	0.06
37	0.41	0.48	0.62	0.06
38	0.49	0.50	0.27	0.06
39	0.44	0.39	0.48	0.06
40	0.56	0.21	-0.05	0.06
41	0.37	0.31	0.83	0.06
42	0.28	0.36	1.31	0.07
43	0.39	0.43	0.73	0.06
44	0.61	0.40	-0.31	0.06
45	0.92	0.33	-2.40	0.10
46	0.57	0.35	-0.10	0.06
47	0.46	0.40	0.40	0.06
48	0.50	0.39	0.19	0.06
49	0.44	0.31	0.47	0.06
50	0.67	0.36	-0.60	0.06
51	0.69	0.46	-0.69	0.06
52	0.53	0.30	0.05	0.06
53	0.52	0.43	0.11	0.06
54	0.51	0.32	0.16	0.06
55	0.59	0.38	-0.22	0.06
56	0.46	0.44	0.39	0.06
57	0.45	0.28	0.46	0.06
58	0.51	0.42	0.15	0.06
59	0.66	0.26	-0.56	0.06
60	0.57	0.43	-0.13	0.06
61	0.60	0.43	-0.24	0.06
62	0.45	0.24	0.42	0.06
63	0.58	0.39	-0.17	0.06
Mean	0.53	0.38	0.04	0.06

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.47	0.29	0.24	0.11
2	0.49	0.21	0.18	0.11
3	0.65	0.44	-0.56	0.12
4	0.68	0.47	-0.72	0.12
5	0.65	0.20	-0.56	0.12
6	0.59	0.26	-0.28	0.12
7	0.49	0.37	0.18	0.11
8	0.49	0.10	0.18	0.11
9	0.45	0.20	0.36	0.12
10	0.50	0.42	0.13	0.11
11	0.73	0.48	-0.99	0.13
12	0.59	0.43	-0.27	0.12
13	0.49	0.47	0.17	0.11
14	0.55	0.33	-0.10	0.11
15	0.56	0.49	-0.15	0.11
16	0.49	0.32	0.15	0.11
17	0.43	0.15	0.44	0.12
18	0.64	0.35	-0.49	0.12
19	0.51	0.48	0.07	0.11
20	0.73	0.31	-0.96	0.13
21	0.72	0.36	-0.89	0.12
22	0.66	0.38	-0.59	0.12
23	0.36	0.48	0.79	0.12
24	0.43	0.45	0.44	0.12
25	0.68	0.43	-0.72	0.12
26	0.42	0.23	0.48	0.12
27	0.37	0.30	0.75	0.12
28	0.45	0.22	0.36	0.12
29	0.43	0.14	0.46	0.12
30	0.39	0.40	0.64	0.12
31	0.50	0.40	0.14	0.11
32	0.51	0.31	0.10	0.11
33	0.54	0.41	-0.04	0.11
34	0.43	0.25	0.46	0.12
35	0.49	0.31	0.18	0.11
36	0.42	0.18	0.49	0.12
37	0.37	0.49	0.75	0.12
38	0.51	0.37	0.08	0.11
39	0.62	0.52	-0.43	0.12
40	0.62	0.54	-0.41	0.12
41	0.68	0.39	-0.73	0.12
42	0.34	0.35	0.87	0.12
43	0.37	0.39	0.73	0.12
44	0.44	0.22	0.40	0.12
45	0.93	0.23	-2.66	0.22
46	0.61	0.34	-0.37	0.12
47	0.37	0.30	0.72	0.12
48	0.51	0.46	0.07	0.11
49	0.47	0.36	0.24	0.11
50	0.49	0.38	0.18	0.11
51	0.68	0.39	-0.73	0.12
52	0.59	0.43	-0.26	0.12
53	0.53	0.35	-0.02	0.11
54	0.41	0.31	0.52	0.12
55	0.55	0.34	-0.08	0.11
56	0.36	0.24	0.80	0.12
57	0.36	0.32	0.77	0.12
58	0.52	0.40	0.03	0.11
59	0.26	0.29	1.30	0.13
60	0.29	0.23	1.15	0.13
61	0.42	0.23	0.49	0.12
62	0.38	0.25	0.68	0.12
63	0.66	0.30	-0.60	0.12
Mean	0.51	0.34	0.06	0.12

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.80	0.44	-0.69	0.05
2	0.68	0.37	0.06	0.04
3	0.82	0.30	-0.81	0.05
4	0.89	0.23	-1.49	0.06
5	0.78	0.39	-0.53	0.05
6	0.68	0.25	0.04	0.04
7	0.74	0.45	-0.29	0.05
8	0.54	0.27	0.70	0.04
9	0.81	0.35	-0.73	0.05
10	0.84	0.33	-1.02	0.06
11	0.67	0.49	0.08	0.04
12	0.69	0.40	-0.04	0.04
13	0.49	0.21	0.95	0.04
14	0.64	0.46	0.22	0.04
15	0.51	0.41	0.88	0.04
16	0.42	0.24	1.29	0.04
17	0.44	0.13	1.20	0.04
18	0.52	0.35	0.84	0.04
19	0.75	0.40	-0.39	0.05
20	0.81	0.45	-0.77	0.05
21	0.86	0.43	-1.16	0.06
22	0.73	0.42	-0.26	0.05
23	0.77	0.41	-0.46	0.05
24	0.48	0.39	0.99	0.04
25	0.69	0.31	-0.01	0.04
26	0.54	0.41	0.70	0.04
27	0.79	0.44	-0.63	0.05
28	0.52	0.48	0.82	0.04
29	0.67	0.22	0.11	0.04
30	0.45	0.26	1.13	0.04
31	0.67	0.42	0.11	0.04
32	0.73	0.45	-0.24	0.05
33	0.32	0.38	1.77	0.04
34	0.86	0.45	-1.17	0.06
35	0.45	0.38	1.16	0.04
36	0.62	0.38	0.36	0.04
37	0.47	0.40	1.06	0.04
38	0.70	0.41	-0.08	0.05
39	0.41	0.28	1.34	0.04
40	0.67	0.44	0.09	0.04
41	0.50	0.35	0.93	0.04
42	0.68	0.41	0.01	0.04
43	0.64	0.45	0.26	0.04
44	0.57	0.35	0.56	0.04
45	0.45	0.36	1.16	0.04
46	0.57	0.48	0.60	0.04
47	0.75	0.38	-0.33	0.05
48	0.64	0.40	0.24	0.04
49	0.76	0.41	-0.43	0.05
50	0.42	0.35	1.26	0.04
Mean	0.64	0.37	0.19	0.05

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.89	0.27	-1.42	0.09
2	0.81	0.39	-0.72	0.07
3	0.40	0.35	1.41	0.06
4	0.71	0.43	-0.10	0.06
5	0.46	0.30	1.15	0.06
6	0.65	0.31	0.20	0.06
7	0.72	0.50	-0.16	0.07
8	0.58	0.44	0.59	0.06
9	0.76	0.45	-0.40	0.07
10	0.41	0.30	1.41	0.06
11	0.66	0.48	0.15	0.06
12	0.71	0.42	-0.12	0.06
13	0.51	0.39	0.89	0.06
14	0.70	0.48	-0.04	0.06
15	0.41	0.36	1.38	0.06
16	0.66	0.41	0.18	0.06
17	0.33	0.26	1.77	0.06
18	0.53	0.33	0.79	0.06
19	0.73	0.40	-0.21	0.07
20	0.82	0.46	-0.79	0.07
21	0.86	0.40	-1.12	0.08
22	0.71	0.43	-0.10	0.06
23	0.26	0.22	2.16	0.07
24	0.67	0.36	0.10	0.06
25	0.69	0.28	0.00	0.06
26	0.50	0.39	0.97	0.06
27	0.79	0.43	-0.62	0.07
28	0.42	0.13	1.36	0.06
29	0.58	0.49	0.59	0.06
30	0.42	0.37	1.35	0.06
31	0.68	0.45	0.05	0.06
32	0.66	0.34	0.18	0.06
33	0.57	0.46	0.63	0.06
34	0.61	0.47	0.40	0.06
35	0.35	0.26	1.71	0.06
36	0.49	0.39	1.00	0.06
37	0.59	0.47	0.53	0.06
38	0.57	0.47	0.64	0.06
39	0.74	0.42	-0.25	0.07
40	0.83	0.29	-0.91	0.08
41	0.78	0.47	-0.52	0.07
42	0.73	0.46	-0.21	0.07
43	0.76	0.43	-0.43	0.07
44	0.23	0.01	2.40	0.07
45	0.70	0.53	-0.07	0.06
46	0.65	0.39	0.20	0.06
47	0.83	0.51	-0.86	0.08
48	0.75	0.44	-0.32	0.07
49	0.63	0.50	0.33	0.06
50	0.83	0.46	-0.91	0.08
Mean	0.63	0.39	0.28	0.06

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.86	0.16	-1.27	0.06
2	0.91	0.25	-1.78	0.07
3	0.72	0.35	-0.29	0.05
4	0.91	0.34	-1.77	0.07
5	0.85	0.42	-1.13	0.06
6	0.48	0.43	0.90	0.04
7	0.78	0.44	-0.67	0.05
8	0.72	0.43	-0.32	0.05
9	0.63	0.26	0.18	0.04
10	0.51	0.41	0.75	0.04
11	0.79	0.34	-0.74	0.05
12	0.61	0.27	0.27	0.04
13	0.75	0.46	-0.45	0.05
14	0.54	0.17	0.58	0.04
15	0.77	0.45	-0.61	0.05
16	0.54	0.29	0.61	0.04
17	0.80	0.19	-0.79	0.05
18	0.60	0.28	0.30	0.04
19	0.30	0.19	1.78	0.05
20	0.61	0.33	0.28	0.04
21	0.71	0.50	-0.24	0.05
22	0.38	0.28	1.35	0.04
23	0.38	0.37	1.35	0.04
24	0.83	0.43	-1.00	0.06
25	0.68	0.32	-0.05	0.05
26	0.78	0.45	-0.63	0.05
27	0.58	0.23	0.40	0.04
28	0.52	0.35	0.68	0.04
29	0.56	0.42	0.51	0.04
30	0.66	0.41	0.03	0.04
31	0.79	0.42	-0.72	0.05
32	0.58	0.33	0.43	0.04
33	0.65	0.52	0.07	0.04
34	0.86	0.45	-1.24	0.06
35	0.67	0.49	-0.05	0.05
36	0.36	0.24	1.46	0.04
37	0.59	0.28	0.37	0.04
38	0.63	0.30	0.19	0.04
39	0.59	0.43	0.36	0.04
40	0.71	0.37	-0.23	0.05
41	0.47	0.38	0.93	0.04
42	0.57	0.38	0.48	0.04
43	0.41	0.38	1.22	0.04
44	0.62	0.30	0.20	0.04
45	0.63	0.51	0.16	0.04
46	0.54	0.40	0.61	0.04
47	0.73	0.31	-0.35	0.05
48	0.76	0.52	-0.53	0.05
49	0.78	0.52	-0.64	0.05
50	0.84	0.40	-1.07	0.06
Mean	0.65	0.36	0.00	0.05

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.84	0.16	-1.25	0.08
2	0.88	0.31	-1.63	0.09
3	0.68	0.38	-0.18	0.06
4	0.85	0.27	-1.29	0.08
5	0.84	0.49	-1.26	0.08
6	0.50	0.45	0.67	0.06
7	0.90	0.40	-1.79	0.09
8	0.76	0.45	-0.63	0.07
9	0.58	0.21	0.29	0.06
10	0.63	0.41	0.05	0.06
11	0.71	0.47	-0.39	0.07
12	0.53	0.42	0.56	0.06
13	0.71	0.47	-0.38	0.07
14	0.38	0.39	1.25	0.06
15	0.60	0.36	0.18	0.06
16	0.47	0.24	0.82	0.06
17	0.75	0.21	-0.61	0.07
18	0.62	0.38	0.09	0.06
19	0.41	0.27	1.12	0.06
20	0.66	0.38	-0.12	0.06
21	0.66	0.40	-0.08	0.06
22	0.45	0.40	0.94	0.06
23	0.65	0.53	-0.05	0.06
24	0.74	0.52	-0.54	0.07
25	0.71	0.41	-0.37	0.07
26	0.61	0.24	0.16	0.06
27	0.44	0.42	0.94	0.06
28	0.61	0.31	0.13	0.06
29	0.59	0.37	0.26	0.06
30	0.66	0.44	-0.10	0.06
31	0.79	0.43	-0.84	0.07
32	0.60	0.29	0.21	0.06
33	0.51	0.49	0.64	0.06
34	0.46	0.37	0.85	0.06
35	0.76	0.50	-0.65	0.07
36	0.35	0.27	1.41	0.06
37	0.59	0.40	0.27	0.06
38	0.61	0.38	0.17	0.06
39	0.60	0.56	0.20	0.06
40	0.38	0.42	1.25	0.06
41	0.46	0.36	0.87	0.06
42	0.35	0.17	1.43	0.06
43	0.47	0.26	0.81	0.06
44	0.68	0.47	-0.20	0.06
45	0.78	0.44	-0.82	0.07
46	0.63	0.47	0.06	0.06
47	0.70	0.50	-0.29	0.06
48	0.61	0.33	0.16	0.06
49	0.72	0.50	-0.42	0.07
50	0.81	0.45	-0.98	0.07
Mean	0.63	0.38	0.02	0.07

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.95	0.23	-2.53	0.13
2	0.76	0.33	-0.64	0.07
3	0.68	0.13	-0.20	0.06
4	0.80	0.12	-0.88	0.07
5	0.58	0.42	0.29	0.06
6	0.55	0.48	0.40	0.06
7	0.90	0.08	-1.77	0.09
8	0.44	0.21	0.95	0.06
9	0.66	0.37	-0.12	0.06
10	0.86	0.39	-1.41	0.08
11	0.65	0.46	-0.03	0.06
12	0.78	0.27	-0.80	0.07
13	0.70	0.39	-0.32	0.06
14	0.70	0.24	-0.30	0.06
15	0.67	0.19	-0.13	0.06
16	0.56	0.32	0.36	0.06
17	0.78	0.50	-0.79	0.07
18	0.45	0.37	0.89	0.06
19	0.80	0.39	-0.89	0.07
20	0.91	0.42	-1.88	0.10
21	0.77	0.48	-0.71	0.07
22	0.66	0.44	-0.11	0.06
23	0.55	0.39	0.45	0.06
24	0.66	0.43	-0.12	0.06
25	0.77	0.44	-0.70	0.07
26	0.77	0.37	-0.73	0.07
27	0.65	0.42	-0.06	0.06
28	0.73	0.46	-0.49	0.07
29	0.80	0.22	-0.88	0.07
30	0.46	0.37	0.84	0.06
31	0.79	0.52	-0.82	0.07
32	0.54	0.26	0.45	0.06
33	0.89	0.37	-1.67	0.09
34	0.76	0.34	-0.63	0.07
35	0.33	0.18	1.47	0.06
36	0.81	0.45	-1.01	0.07
37	0.52	0.34	0.55	0.06
38	0.69	0.37	-0.25	0.06
39	0.47	0.28	0.79	0.06
40	0.54	0.40	0.46	0.06
41	0.39	0.43	1.16	0.06
42	0.62	0.40	0.09	0.06
43	0.52	0.48	0.55	0.06
44	0.52	0.34	0.58	0.06
45	0.72	0.35	-0.40	0.06
46	0.65	0.37	-0.04	0.06
47	0.51	0.30	0.61	0.06
48	0.74	0.53	-0.54	0.07
49	0.46	0.24	0.86	0.06
50	0.53	0.33	0.53	0.06
Mean	0.66	0.35	-0.19	0.07

Item Number	P-value	Point Biserial	Rasch Diff.	SE (Diff.)
1	0.93	0.20	-2.35	0.18
2	0.74	0.30	-0.65	0.10
3	0.63	0.22	-0.13	0.10
4	0.93	0.08	-2.26	0.17
5	0.53	0.47	0.36	0.09
6	0.32	0.45	1.35	0.10
7	0.70	0.44	-0.45	0.10
8	0.35	0.34	1.23	0.10
9	0.64	0.08	-0.15	0.10
10	0.85	0.31	-1.39	0.13
11	0.49	0.45	0.55	0.09
12	0.74	0.29	-0.68	0.11
13	0.68	0.40	-0.38	0.10
14	0.46	0.37	0.67	0.09
15	0.70	0.26	-0.47	0.10
16	0.24	0.23	1.83	0.11
17	0.73	0.50	-0.62	0.10
18	0.38	0.22	1.07	0.10
19	0.77	0.45	-0.85	0.11
20	0.87	0.44	-1.64	0.14
21	0.75	0.39	-0.72	0.11
22	0.58	0.54	0.15	0.09
23	0.57	0.31	0.20	0.09
24	0.61	0.44	0.00	0.10
25	0.73	0.38	-0.60	0.10
26	0.46	0.26	0.69	0.09
27	0.56	0.41	0.22	0.09
28	0.72	0.46	-0.58	0.10
29	0.81	0.17	-1.11	0.12
30	0.38	0.35	1.04	0.10
31	0.74	0.51	-0.68	0.11
32	0.46	0.44	0.71	0.09
33	0.62	0.42	-0.04	0.10
34	0.52	0.32	0.42	0.09
35	0.38	0.36	1.06	0.10
36	0.82	0.48	-1.23	0.12
37	0.45	0.37	0.73	0.09
38	0.48	0.15	0.58	0.09
39	0.45	0.22	0.73	0.09
40	0.99	0.03	-4.42	0.45
41	0.37	0.30	1.11	0.10
42	0.62	0.43	-0.07	0.10
43	0.49	0.47	0.53	0.09
44	0.59	0.38	0.11	0.10
45	0.64	0.28	-0.17	0.10
46	0.59	0.44	0.09	0.10
47	0.37	0.28	1.13	0.10
48	0.71	0.51	-0.53	0.10
49	0.60	0.41	0.06	0.10
50	0.71	0.33	-0.54	0.10
Mean	0.61	0.35	-0.12	0.11

Item Analysis for Writing 5: Multiple Choice Core 1, Writing Prompt 1

Item Number	Item Type	P-value	Point Bi serial	Rasch Diff.	SE (Rasch Diff.)
1	Multiple Choice	0.89	0.34	-0.36	0.09
2	Multiple Choice	0.86	0.35	-0.09	0.09
3	Multiple Choice	0.91	0.32	-0.37	0.09
4	Multiple Choice	0.84	0.27	0.18	0.08
5	Multiple Choice	0.79	0.30	0.09	0.08
6	Multiple Choice	0.95	0.16	-1.16	0.12
7	Multiple Choice	0.82	0.30	0.07	0.08
8	Multiple Choice	0.93	0.28	-1.22	0.12
9	Multiple Choice	0.68	0.29	0.81	0.07
10	Multiple Choice	0.66	0.33	1.24	0.07
11	Multiple Choice	0.82	0.37	0.17	0.08
12	Multiple Choice	0.70	0.19	1.03	0.07
13	Multiple Choice	0.84	0.34	0.01	0.08
14	Multiple Choice	0.80	0.27	0.31	0.08
15	Multiple Choice	0.92	0.30	-0.91	0.11
16	Multiple Choice	0.90	0.28	-0.65	0.10
17	Multiple Choice	0.84	0.35	0.04	0.08
18	Multiple Choice	0.64	0.35	1.36	0.07
19	Multiple Choice	0.84	0.30	0.05	0.08
20	Multiple Choice	0.88	0.39	-0.35	0.09
21	Multiple Choice	5.26	0.64	1.85	0.03
22	Multiple Choice	5.23	0.68	1.86	0.03
23	Multiple Choice	6.25	0.67	0.96	0.03

Item Analysis for Writing 5: Multiple Choice Core 1, Writing Prompt 2

Item Number	Item Type	P-value	Point Bi serial	Rasch Diff.	SE (Rasch Diff.)
1	Multiple Choice	0.85	0.36	-0.36	0.15
2	Multiple Choice	0.81	0.33	-0.09	0.14
3	Multiple Choice	0.89	0.32	-0.37	0.15
4	Multiple Choice	0.83	0.32	0.18	0.13
5	Multiple Choice	0.78	0.30	0.09	0.13
6	Multiple Choice	0.95	0.23	-1.16	0.19
7	Multiple Choice	0.77	0.33	0.07	0.13
8	Multiple Choice	0.93	0.26	-1.22	0.19
9	Multiple Choice	0.63	0.31	0.81	0.12
10	Multiple Choice	0.65	0.34	1.14	0.11
11	Multiple Choice	0.76	0.45	0.42	0.13
12	Multiple Choice	0.67	0.31	1.03	0.12
13	Multiple Choice	0.81	0.45	0.10	0.13
14	Multiple Choice	0.82	0.34	-0.03	0.14
15	Multiple Choice	0.92	0.37	-1.08	0.18
16	Multiple Choice	0.90	0.22	-0.82	0.17
17	Multiple Choice	0.83	0.32	-0.07	0.14
18	Multiple Choice	0.55	0.43	1.64	0.11
19	Multiple Choice	0.78	0.33	0.32	0.13
20	Multiple Choice	0.82	0.32	-0.02	0.14
21	Composing	0.54	0.65	1.53	0.05
22	Written Expression	0.53	0.67	1.65	0.05
23	Usage & Mechanics	0.67	0.56	0.89	0.05

Item Analysis for Writing 5: Multiple Choice Core 2, Writing Prompt 1

Item Number	Item Type	P-value	Point Bi serial	Rasch Diff.	SE (Rasch Diff.)
1	Multiple Choice	0.85	0.33	-0.36	0.15
2	Multiple Choice	0.83	0.29	-0.09	0.14
3	Multiple Choice	0.91	0.26	-0.37	0.15
4	Multiple Choice	0.82	0.37	0.18	0.13
5	Multiple Choice	0.72	0.25	0.09	0.13
6	Multiple Choice	0.95	0.19	-1.16	0.19
7	Multiple Choice	0.85	0.36	0.07	0.13
8	Multiple Choice	0.89	0.21	-1.22	0.19
9	Multiple Choice	0.63	0.37	0.81	0.11
10	Multiple Choice	0.80	0.26	0.14	0.13
11	Multiple Choice	0.66	0.46	1.00	0.11
12	Multiple Choice	0.52	0.13	1.70	0.11
13	Multiple Choice	0.84	0.21	-0.20	0.14
14	Multiple Choice	0.84	0.30	-0.17	0.14
15	Multiple Choice	0.87	0.21	-0.50	0.15
16	Multiple Choice	0.54	0.31	1.60	0.11
17	Multiple Choice	0.72	0.18	0.66	0.12
18	Multiple Choice	0.60	0.52	1.33	0.11
19	Multiple Choice	0.35	0.17	2.58	0.11
20	Multiple Choice	0.52	0.26	1.71	0.11
21	Composing	0.51	0.70	1.65	0.05
22	Written Expression	0.50	0.75	1.71	0.05
23	Usage & Mechanics	0.61	0.69	1.22	0.04

Item Analysis for Writing 5: Multiple Choice Core 2, Writing Prompt 2

Item Number	Item Type	P-value	Point Bi serial	Rasch Diff.	SE (Rasch Diff.)
1	Multiple Choice	0.89	0.31	-0.36	0.05
2	Multiple Choice	0.83	0.33	-0.09	0.05
3	Multiple Choice	0.90	0.30	-0.37	0.05
4	Multiple Choice	0.82	0.31	0.18	0.04
5	Multiple Choice	0.83	0.24	0.09	0.04
6	Multiple Choice	0.95	0.19	-1.16	0.07
7	Multiple Choice	0.83	0.35	0.07	0.04
8	Multiple Choice	0.94	0.26	-1.22	0.07
9	Multiple Choice	0.66	0.29	0.81	0.04
10	Multiple Choice	0.79	0.30	0.43	0.04
11	Multiple Choice	0.69	0.32	1.06	0.04
12	Multiple Choice	0.59	0.21	1.59	0.03
13	Multiple Choice	0.86	0.30	-0.12	0.05
14	Multiple Choice	0.89	0.32	-0.42	0.05
15	Multiple Choice	0.88	0.21	-0.33	0.05
16	Multiple Choice	0.56	0.33	1.72	0.03
17	Multiple Choice	0.72	0.25	0.90	0.04
18	Multiple Choice	0.72	0.48	0.86	0.04
19	Multiple Choice	0.43	0.24	2.41	0.03
20	Multiple Choice	0.54	0.21	1.85	0.03
21	Composing	0.56	0.64	1.63	0.02
22	Written Expression	0.56	0.66	1.58	0.02
23	Usage & Mechanics	0.68	0.65	1.04	0.02

Item Analysis for Writing 5: Multiple Choice Core 3, Writing Prompt 1

Item Number	Item Type	P-value	Point Bi serial	Rasch Diff.	SE (Rasch Diff.)
1	Multiple Choice	0.85	0.26	-0.36	0.09
2	Multiple Choice	0.81	0.26	-0.09	0.08
3	Multiple Choice	0.89	0.27	-0.37	0.09
4	Multiple Choice	0.74	0.29	0.18	0.08
5	Multiple Choice	0.81	0.23	0.09	0.08
6	Multiple Choice	0.92	0.25	-1.16	0.11
7	Multiple Choice	0.75	0.33	0.07	0.08
8	Multiple Choice	0.94	0.16	-1.22	0.12
9	Multiple Choice	0.57	0.25	0.81	0.07
10	Multiple Choice	0.39	0.30	2.25	0.07
11	Multiple Choice	0.82	0.42	-0.17	0.08
12	Multiple Choice	0.81	0.34	-0.02	0.08
13	Multiple Choice	0.87	0.36	-0.53	0.09
14	Multiple Choice	0.93	0.31	-1.36	0.12
15	Multiple Choice	0.80	0.24	0.02	0.08
16	Multiple Choice	0.66	0.20	0.87	0.07
17	Multiple Choice	0.72	0.34	0.51	0.07
18	Multiple Choice	0.86	0.26	-0.48	0.09
19	Multiple Choice	0.58	0.13	1.29	0.07
20	Multiple Choice	0.78	0.13	0.15	0.08
21	Composing	0.45	0.64	1.97	0.03
22	Written Expression	0.46	0.69	1.88	0.03
23	Usage & Mechanics	0.64	0.63	0.93	0.03

Item Analysis for Writing 5: Multiple Choice Core 3, Writing Prompt 2

Item Number	Item Type	P-value	Point Bi serial	Rasch Diff.	SE (Rasch Diff.)
1	Multiple Choice	0.82	0.39	-0.36	0.11
2	Multiple Choice	0.75	0.42	-0.09	0.11
3	Multiple Choice	0.83	0.37	-0.37	0.11
4	Multiple Choice	0.74	0.35	0.18	0.10
5	Multiple Choice	0.73	0.26	0.09	0.10
6	Multiple Choice	0.92	0.32	-1.16	0.14
7	Multiple Choice	0.74	0.36	0.07	0.10
8	Multiple Choice	0.90	0.35	-1.22	0.14
9	Multiple Choice	0.60	0.31	0.81	0.09
10	Multiple Choice	0.38	0.24	2.06	0.09
11	Multiple Choice	0.81	0.36	-0.33	0.11
12	Multiple Choice	0.81	0.48	-0.32	0.11
13	Multiple Choice	0.78	0.45	-0.09	0.11
14	Multiple Choice	0.92	0.37	-1.42	0.15
15	Multiple Choice	0.68	0.26	0.55	0.10
16	Multiple Choice	0.57	0.24	1.14	0.09
17	Multiple Choice	0.65	0.39	0.71	0.09
18	Multiple Choice	0.83	0.35	-0.48	0.12
19	Multiple Choice	0.56	0.23	1.15	0.09
20	Multiple Choice	0.75	0.19	0.07	0.10
21	Composing	0.45	0.60	1.85	0.05
22	Written Expression	0.44	0.65	1.84	0.05
23	Usage & Mechanics	0.59	0.65	0.99	0.04

Item Analysis for Writing 8: Multiple Choice Core 1, Writing Prompt 1

Item Number	Item Type	P-value	Point Bi serial	Rasch Diff.	SE (Rasch Diff.)
1	Multiple Choice	0.92	0.27	-1.49	0.09
2	Multiple Choice	0.64	0.36	0.42	0.06
3	Multiple Choice	0.95	0.25	-2.63	0.14
4	Multiple Choice	0.72	0.34	-0.01	0.06
5	Multiple Choice	0.59	0.24	0.82	0.06
6	Multiple Choice	0.79	0.34	-0.33	0.06
7	Multiple Choice	0.69	0.39	0.20	0.06
8	Multiple Choice	0.83	0.23	-0.51	0.07
9	Multiple Choice	0.93	0.18	-1.30	0.08
10	Multiple Choice	0.73	0.38	-0.24	0.06
11	Multiple Choice	0.91	0.30	-1.58	0.09
12	Multiple Choice	0.39	0.19	1.84	0.06
13	Multiple Choice	0.60	0.28	0.78	0.06
14	Multiple Choice	0.84	0.35	-0.75	0.07
15	Multiple Choice	0.63	0.34	0.61	0.06
16	Multiple Choice	0.82	0.31	-0.60	0.07
17	Multiple Choice	0.86	0.31	-0.96	0.08
18	Multiple Choice	0.79	0.35	-0.36	0.07
19	Multiple Choice	0.44	0.35	1.57	0.06
20	Multiple Choice	0.72	0.36	0.05	0.06
21	Composing	0.53	0.52	0.92	0.03
22	Written Expression	0.54	0.52	0.83	0.03
23	Usage & Mechanics	0.65	0.49	0.39	0.02

Item Analysis for Writing 8: Multiple Choice Core 1, Writing Prompt 2

Item Number	Item Type	P-value	Point Bi serial	Rasch Diff.	SE (Rasch Diff.)
1	Multiple Choice	0.91	0.30	-1.49	0.06
2	Multiple Choice	0.63	0.40	0.42	0.04
3	Multiple Choice	0.96	0.26	-2.63	0.10
4	Multiple Choice	0.72	0.36	-0.01	0.04
5	Multiple Choice	0.57	0.22	0.82	0.04
6	Multiple Choice	0.74	0.31	-0.33	0.05
7	Multiple Choice	0.65	0.44	0.20	0.04
8	Multiple Choice	0.78	0.28	-0.51	0.05
9	Multiple Choice	0.90	0.21	-1.30	0.06
10	Multiple Choice	0.73	0.38	-0.24	0.05
11	Multiple Choice	0.90	0.32	-1.54	0.06
12	Multiple Choice	0.40	0.19	1.70	0.04
13	Multiple Choice	0.64	0.28	0.45	0.04
14	Multiple Choice	0.84	0.35	-0.89	0.05
15	Multiple Choice	0.65	0.37	0.39	0.04
16	Multiple Choice	0.75	0.26	-0.21	0.05
17	Multiple Choice	0.81	0.30	-0.68	0.05
18	Multiple Choice	0.77	0.38	-0.37	0.05
19	Multiple Choice	0.47	0.35	1.34	0.04
20	Multiple Choice	0.67	0.40	0.25	0.04
21	Composing	0.52	0.67	1.01	0.02
22	Written Expression	0.53	0.70	1.01	0.02
23	Usage & Mechanics	0.61	0.65	0.56	0.02

Item Analysis for Writing 8: Multiple Choice Core 1, Writing Prompt 3

Item Number	Item Type	P-value	Point Bi serial	Rasch Diff.	SE (Rasch Diff.)
1	Multiple Choice	0.80	0.46	-1.49	0.27
2	Multiple Choice	0.50	0.46	0.42	0.21
3	Multiple Choice	0.89	0.35	-2.63	0.38
4	Multiple Choice	0.66	0.52	-0.01	0.21
5	Multiple Choice	0.53	0.37	0.82	0.21
6	Multiple Choice	0.67	0.26	-0.33	0.22
7	Multiple Choice	0.54	0.37	0.20	0.21
8	Multiple Choice	0.69	0.39	-0.51	0.22
9	Multiple Choice	0.85	0.20	-1.30	0.26
10	Multiple Choice	0.63	0.39	-0.24	0.21
11	Multiple Choice	0.88	0.39	-1.95	0.30
12	Multiple Choice	0.28	0.02	1.79	0.23
13	Multiple Choice	0.46	0.33	0.75	0.21
14	Multiple Choice	0.72	0.32	-0.64	0.23
15	Multiple Choice	0.52	0.45	0.45	0.21
16	Multiple Choice	0.63	0.39	-0.14	0.21
17	Multiple Choice	0.80	0.38	-1.26	0.25
18	Multiple Choice	0.62	0.58	-0.07	0.21
19	Multiple Choice	0.38	0.31	1.18	0.21
20	Multiple Choice	0.58	0.46	0.15	0.21
21	Composing	0.48	0.76	0.70	0.10
22	Written Expression	0.47	0.76	0.73	0.10
23	Usage & Mechanics	0.46	0.69	0.81	0.09

Item Analysis for Writing 8: Multiple Choice Core 2, Writing Prompt 1

Item Number	Item Type	P-value	Point Bi serial	Rasch Diff.	SE (Rasch Diff.)
1	Multiple Choice	0.93	0.23	-1.49	0.17
2	Multiple Choice	0.58	0.36	0.42	0.11
3	Multiple Choice	0.97	0.20	-2.63	0.26
4	Multiple Choice	0.70	0.31	-0.01	0.12
5	Multiple Choice	0.54	0.25	0.82	0.11
6	Multiple Choice	0.76	0.28	-0.33	0.12
7	Multiple Choice	0.67	0.36	0.20	0.11
8	Multiple Choice	0.80	0.26	-0.51	0.13
9	Multiple Choice	0.91	0.24	-1.30	0.16
10	Multiple Choice	0.70	0.38	-0.24	0.12
11	Multiple Choice	0.91	0.26	-1.58	0.17
12	Multiple Choice	0.80	0.30	-0.56	0.13
13	Multiple Choice	0.44	0.15	1.38	0.11
14	Multiple Choice	0.54	0.26	0.87	0.11
15	Multiple Choice	0.61	0.27	0.53	0.11
16	Multiple Choice	0.84	0.24	-0.87	0.14
17	Multiple Choice	0.56	0.25	0.80	0.11
18	Multiple Choice	0.62	0.36	0.51	0.11
19	Multiple Choice	0.73	0.42	-0.10	0.12
20	Multiple Choice	0.59	0.17	0.66	0.11
21	Composing	0.51	0.37	0.91	0.05
22	Written Expression	0.54	0.40	0.76	0.05
23	Usage & Mechanics	0.62	0.43	0.49	0.05

Item Analysis for Writing 8: Multiple Choice Core 2, Writing Prompt 2

Item Number	Item Type	P-value	Point Bi serial	Rasch Diff.	SE (Rasch Diff.)
1	Multiple Choice	0.93	0.27	-1.49	0.05
2	Multiple Choice	0.64	0.39	0.42	0.03
3	Multiple Choice	0.97	0.23	-2.63	0.08
4	Multiple Choice	0.73	0.31	-0.01	0.04
5	Multiple Choice	0.60	0.25	0.82	0.03
6	Multiple Choice	0.80	0.34	-0.33	0.04
7	Multiple Choice	0.71	0.43	0.20	0.03
8	Multiple Choice	0.80	0.28	-0.51	0.04
9	Multiple Choice	0.91	0.20	-1.30	0.05
10	Multiple Choice	0.78	0.42	-0.24	0.04
11	Multiple Choice	0.91	0.27	-1.49	0.05
12	Multiple Choice	0.83	0.34	-0.59	0.04
13	Multiple Choice	0.49	0.16	1.37	0.03
14	Multiple Choice	0.62	0.19	0.69	0.03
15	Multiple Choice	0.60	0.28	0.79	0.03
16	Multiple Choice	0.86	0.20	-0.91	0.04
17	Multiple Choice	0.63	0.28	0.64	0.03
18	Multiple Choice	0.60	0.38	0.80	0.03
19	Multiple Choice	0.74	0.34	0.01	0.04
20	Multiple Choice	0.64	0.21	0.61	0.03
21	Composing	0.58	0.69	0.74	0.02
22	Written Expression	0.58	0.72	0.73	0.02
23	Usage & Mechanics	0.65	0.71	0.45	0.01

Item Analysis for Writing 8: Multiple Choice Core 2, Writing Prompt 3

Item Number	Item Type	P-value	Point Bi serial	Rasch Diff.	SE (Rasch Diff.)
1	Multiple Choice	0.93	0.25	-1.49	0.34
2	Multiple Choice	0.67	0.52	0.42	0.23
3	Multiple Choice	0.95	0.31	-2.63	0.53
4	Multiple Choice	0.73	0.39	-0.01	0.24
5	Multiple Choice	0.62	0.20	0.82	0.22
6	Multiple Choice	0.84	0.37	-0.33	0.25
7	Multiple Choice	0.62	0.46	0.20	0.23
8	Multiple Choice	0.77	0.19	-0.51	0.26
9	Multiple Choice	0.91	0.24	-1.30	0.32
10	Multiple Choice	0.75	0.50	-0.24	0.25
11	Multiple Choice	0.92	0.36	-1.68	0.37
12	Multiple Choice	0.80	0.31	-0.50	0.26
13	Multiple Choice	0.47	0.18	1.45	0.22
14	Multiple Choice	0.55	0.29	1.02	0.22
15	Multiple Choice	0.67	0.36	0.38	0.23
16	Multiple Choice	0.86	0.22	-1.03	0.30
17	Multiple Choice	0.65	0.30	0.48	0.23
18	Multiple Choice	0.63	0.51	0.58	0.22
19	Multiple Choice	0.68	0.37	0.33	0.23
20	Multiple Choice	0.56	0.24	0.97	0.22
21	Composing	0.54	0.58	1.05	0.09
22	Written Expression	0.57	0.55	0.89	0.09
23	Usage & Mechanics	0.58	0.62	0.87	0.09

Item Analysis for Writing 8: Multiple Choice Core 3, Writing Prompt 1

Item Number	Item Type	P-value	Point Bi serial	Rasch Diff.	SE (Rasch Diff.)
1	Multiple Choice	0.87	0.32	-1.49	0.09
2	Multiple Choice	0.61	0.36	0.42	0.06
3	Multiple Choice	0.96	0.21	-2.63	0.14
4	Multiple Choice	0.65	0.32	-0.01	0.06
5	Multiple Choice	0.53	0.20	0.82	0.06
6	Multiple Choice	0.69	0.32	-0.33	0.07
7	Multiple Choice	0.58	0.38	0.20	0.06
8	Multiple Choice	0.86	0.25	-0.51	0.07
9	Multiple Choice	0.92	0.15	-1.30	0.08
10	Multiple Choice	0.67	0.34	-0.24	0.06
11	Multiple Choice	0.79	0.22	-0.61	0.07
12	Multiple Choice	0.68	0.36	0.06	0.06
13	Multiple Choice	0.40	0.27	1.43	0.06
14	Multiple Choice	0.66	0.33	0.17	0.06
15	Multiple Choice	0.69	0.40	-0.02	0.06
16	Multiple Choice	0.58	0.31	0.56	0.06
17	Multiple Choice	0.56	0.20	0.64	0.06
18	Multiple Choice	0.69	0.33	-0.01	0.06
19	Multiple Choice	0.78	0.37	-0.54	0.07
20	Multiple Choice	0.56	0.26	0.66	0.06
21	Composing	0.50	0.46	0.82	0.03
22	Written Expression	0.52	0.52	0.70	0.03
23	Usage & Mechanics	0.58	0.50	0.47	0.02

Item Analysis for Writing 8: Multiple Choice Core 3, Writing Prompt 2

Item Number	Item Type	P-value	Point Bi serial	Rasch Diff.	SE (Rasch Diff.)
1	Multiple Choice	0.92	0.31	-1.49	0.07
2	Multiple Choice	0.66	0.39	0.42	0.05
3	Multiple Choice	0.97	0.26	-2.63	0.11
4	Multiple Choice	0.72	0.36	-0.01	0.05
5	Multiple Choice	0.62	0.25	0.82	0.04
6	Multiple Choice	0.82	0.37	-0.33	0.05
7	Multiple Choice	0.72	0.43	0.20	0.05
8	Multiple Choice	0.81	0.27	-0.51	0.05
9	Multiple Choice	0.90	0.21	-1.30	0.07
10	Multiple Choice	0.80	0.43	-0.24	0.05
11	Multiple Choice	0.84	0.21	-0.65	0.06
12	Multiple Choice	0.75	0.39	0.03	0.05
13	Multiple Choice	0.58	0.43	1.03	0.04
14	Multiple Choice	0.74	0.38	0.08	0.05
15	Multiple Choice	0.82	0.43	-0.48	0.05
16	Multiple Choice	0.67	0.32	0.56	0.05
17	Multiple Choice	0.66	0.22	0.58	0.05
18	Multiple Choice	0.80	0.37	-0.30	0.05
19	Multiple Choice	0.81	0.36	-0.41	0.05
20	Multiple Choice	0.62	0.31	0.81	0.04
21	Composing	0.57	0.62	0.97	0.02
22	Written Expression	0.58	0.67	0.93	0.02
23	Usage & Mechanics	0.65	0.67	0.56	0.02

Item Analysis for Writing 8: Multiple Choice Core 3, Writing Prompt 3

Item Number	Item Type	P-value	Point Bi serial	Rasch Diff.	SE (Rasch Diff.)
1	Multiple Choice	0.93	0.32	-1.49	0.46
2	Multiple Choice	0.59	0.48	0.42	0.30
3	Multiple Choice	0.99	-0.12	-2.63	0.69
4	Multiple Choice	0.65	0.25	-0.01	0.32
5	Multiple Choice	0.59	0.50	0.82	0.29
6	Multiple Choice	0.75	0.44	-0.33	0.34
7	Multiple Choice	0.72	0.40	0.20	0.31
8	Multiple Choice	0.86	0.35	-0.51	0.35
9	Multiple Choice	0.90	0.03	-1.30	0.43
10	Multiple Choice	0.84	0.53	-0.24	0.33
11	Multiple Choice	0.81	0.33	-0.41	0.34
12	Multiple Choice	0.70	0.59	0.41	0.30
13	Multiple Choice	0.61	0.42	0.92	0.29
14	Multiple Choice	0.72	0.46	0.22	0.31
15	Multiple Choice	0.86	0.49	-0.80	0.37
16	Multiple Choice	0.64	0.31	0.75	0.29
17	Multiple Choice	0.77	0.29	-0.08	0.32
18	Multiple Choice	0.67	0.35	0.58	0.29
19	Multiple Choice	0.71	0.64	0.32	0.30
20	Multiple Choice	0.67	0.38	0.58	0.29
21	Composing	0.62	0.47	0.71	0.13
22	Written Expression	0.67	0.44	0.97	0.13
23	Usage & Mechanics	0.71	0.25	0.21	0.13

Item Analysis for Writing High School EOC: Multiple Choice Core 1, Writing Prompt 1

Item Number	Item Type	P-value	Point Bi serial	Rasch Diff.	SE (Rasch Diff.)
1	Multiple Choice	0.98	0.14	-2.56	0.20
2	Multiple Choice	0.98	0.18	-2.74	0.22
3	Multiple Choice	0.84	0.38	-0.29	0.09
4	Multiple Choice	0.78	0.40	0.00	0.08
5	Multiple Choice	0.76	0.40	0.35	0.08
6	Multiple Choice	0.82	0.36	0.22	0.08
7	Multiple Choice	0.65	0.44	1.04	0.07
8	Multiple Choice	0.75	0.46	0.15	0.08
9	Multiple Choice	0.70	0.43	0.55	0.08
10	Multiple Choice	0.88	0.30	-0.65	0.10
11	Multiple Choice	0.94	0.24	-1.58	0.14
12	Multiple Choice	0.85	0.44	-0.42	0.09
13	Multiple Choice	0.79	0.46	0.07	0.08
14	Multiple Choice	0.70	0.38	0.68	0.07
15	Multiple Choice	0.64	0.39	1.03	0.07
16	Multiple Choice	0.77	0.38	0.23	0.08
17	Multiple Choice	0.90	0.32	-0.99	0.11
18	Multiple Choice	0.43	0.43	2.16	0.07
19	Multiple Choice	0.70	0.43	0.67	0.07
20	Multiple Choice	0.58	0.27	1.38	0.07
21	Multiple Choice	0.81	0.36	-0.02	0.08
22	Multiple Choice	0.49	0.23	1.84	0.07
23	Multiple Choice	0.88	0.36	-0.73	0.10
24	Multiple Choice	0.47	0.44	1.91	0.07
25	Multiple Choice	0.60	0.40	1.24	0.07
26	Multiple Choice	0.53	0.47	1.60	0.07
27	Multiple Choice	0.47	0.33	1.95	0.07
28	Multiple Choice	0.47	0.25	1.94	0.07
29	Multiple Choice	0.57	0.30	1.41	0.07
30	Multiple Choice	0.53	0.29	1.60	0.07
31	Composing	0.56	0.42	1.36	0.03
32	Written Expression	0.54	0.45	1.50	0.03
33	Usage & Mechanics	0.64	0.43	1.05	0.03

Item Analysis for Writing High School EOC: Multiple Choice Core 1, Writing Prompt 2

Item Number	Item Type	P-value	Point Bi serial	Rasch Diff.	SE (Rasch Diff.)
1	Multiple Choice	0.98	0.09	-2.64	0.16
2	Multiple Choice	0.98	0.12	-2.92	0.19
3	Multiple Choice	0.86	0.34	-0.29	0.07
4	Multiple Choice	0.78	0.42	0.00	0.06
5	Multiple Choice	0.75	0.39	0.35	0.06
6	Multiple Choice	0.82	0.37	0.22	0.06
7	Multiple Choice	0.62	0.41	1.04	0.05
8	Multiple Choice	0.80	0.43	0.15	0.06
9	Multiple Choice	0.72	0.40	0.55	0.06
10	Multiple Choice	0.86	0.30	-0.42	0.07
11	Multiple Choice	0.93	0.20	-1.34	0.10
12	Multiple Choice	0.86	0.40	-0.40	0.07
13	Multiple Choice	0.81	0.41	0.01	0.06
14	Multiple Choice	0.74	0.34	0.49	0.06
15	Multiple Choice	0.66	0.36	1.01	0.05
16	Multiple Choice	0.80	0.39	0.11	0.06
17	Multiple Choice	0.91	0.36	-0.99	0.09
18	Multiple Choice	0.47	0.39	1.96	0.05
19	Multiple Choice	0.75	0.36	0.46	0.06
20	Multiple Choice	0.54	0.21	1.60	0.05
21	Multiple Choice	0.81	0.31	0.02	0.06
22	Multiple Choice	0.50	0.23	1.80	0.05
23	Multiple Choice	0.89	0.35	-0.71	0.08
24	Multiple Choice	0.49	0.47	1.87	0.05
25	Multiple Choice	0.62	0.37	1.20	0.05
26	Multiple Choice	0.52	0.41	1.72	0.05
27	Multiple Choice	0.49	0.27	1.84	0.05
28	Multiple Choice	0.49	0.25	1.83	0.05
29	Multiple Choice	0.55	0.30	1.55	0.05
30	Multiple Choice	0.51	0.24	1.76	0.05
31	Composing	0.58	0.47	1.21	0.02
32	Written Expression	0.56	0.50	1.33	0.02
33	Usage & Mechanics	0.65	0.48	0.95	0.02

Item Number	Item Type	P-value	Point Bi serial	Rasch Diff.	SE (Rasch Diff.)
1	Multiple Choice	0.97	0.23	-2.62	0.20
2	Multiple Choice	0.96	0.25	-2.30	0.18
3	Multiple Choice	0.82	0.35	-0.29	0.09
4	Multiple Choice	0.73	0.41	0.00	0.09
5	Multiple Choice	0.73	0.44	0.35	0.08
6	Multiple Choice	0.78	0.41	-0.14	0.09
7	Multiple Choice	0.56	0.32	1.04	0.08
8	Multiple Choice	0.72	0.40	0.15	0.09
9	Multiple Choice	0.67	0.40	0.55	0.08
10	Multiple Choice	0.84	0.45	-0.61	0.10
11	Multiple Choice	0.71	0.26	0.29	0.08
12	Multiple Choice	0.79	0.47	-0.22	0.09
13	Multiple Choice	0.68	0.34	0.46	0.08
14	Multiple Choice	0.90	0.34	-1.27	0.12
15	Multiple Choice	0.63	0.47	0.75	0.08
16	Multiple Choice	0.77	0.32	-0.09	0.09
17	Multiple Choice	0.64	0.35	0.68	0.08
18	Multiple Choice	0.49	0.17	1.45	0.08
19	Multiple Choice	0.62	0.53	0.80	0.08
20	Multiple Choice	0.74	0.31	0.08	0.09
21	Multiple Choice	0.75	0.38	0.03	0.09
22	Multiple Choice	0.82	0.43	-0.47	0.10
23	Multiple Choice	0.82	0.42	-0.46	0.10
24	Multiple Choice	0.28	0.14	2.62	0.08
25	Multiple Choice	0.62	0.26	0.81	0.08
26	Multiple Choice	0.75	0.51	0.03	0.09
27	Multiple Choice	0.62	0.37	0.80	0.08
28	Multiple Choice	0.77	0.34	-0.09	0.09
29	Multiple Choice	0.39	0.28	2.00	0.08
30	Multiple Choice	0.77	0.44	-0.11	0.09
31	Composing	0.46	0.39	1.70	0.04
32	Written Expression	0.46	0.43	1.66	0.04
33	Usage & Mechanics	0.55	0.39	1.06	0.03

Item Analysis for Writing High School EOC: Multiple Choice Core 2, Writing Prompt 2

Item Number	Item Type	P-value	Point Bi serial	Rasch Diff.	SE (Rasch Diff.)
1	Multiple Choice	0.98	0.15	-2.45	0.12
2	Multiple Choice	0.98	0.17	-2.58	0.12
3	Multiple Choice	0.86	0.36	-0.29	0.05
4	Multiple Choice	0.80	0.41	0.00	0.05
5	Multiple Choice	0.78	0.42	0.35	0.05
6	Multiple Choice	0.83	0.37	0.22	0.05
7	Multiple Choice	0.61	0.36	1.04	0.04
8	Multiple Choice	0.80	0.45	0.15	0.05
9	Multiple Choice	0.73	0.42	0.55	0.05
10	Multiple Choice	0.88	0.41	-0.54	0.06
11	Multiple Choice	0.77	0.28	0.37	0.05
12	Multiple Choice	0.86	0.43	-0.34	0.05
13	Multiple Choice	0.77	0.40	0.37	0.05
14	Multiple Choice	0.92	0.29	-1.16	0.07
15	Multiple Choice	0.76	0.48	0.40	0.05
16	Multiple Choice	0.82	0.35	-0.01	0.05
17	Multiple Choice	0.70	0.32	0.82	0.04
18	Multiple Choice	0.49	0.18	1.92	0.04
19	Multiple Choice	0.72	0.53	0.70	0.04
20	Multiple Choice	0.81	0.23	0.09	0.05
21	Multiple Choice	0.79	0.30	0.21	0.05
22	Multiple Choice	0.89	0.42	-0.73	0.06
23	Multiple Choice	0.87	0.40	-0.45	0.06
24	Multiple Choice	0.35	0.19	2.69	0.04
25	Multiple Choice	0.67	0.28	1.01	0.04
26	Multiple Choice	0.84	0.43	-0.20	0.05
27	Multiple Choice	0.67	0.33	0.97	0.04
28	Multiple Choice	0.82	0.39	-0.04	0.05
29	Multiple Choice	0.51	0.40	1.85	0.04
30	Multiple Choice	0.84	0.36	-0.19	0.05
31	Composing	0.56	0.38	1.38	0.02
32	Written Expression	0.56	0.41	1.39	0.02
33	Usage & Mechanics	0.65	0.43	0.99	0.02